

CHOICE

WATER FILTERS ON TEST

They may not do what
you think they do

RINGING THE CHANGES

Telecom or Optus —
which to choose?

CREDIT CARD FEES

Many consumers will
be worse off

Compact cameras



Dishwashers



CHOICE

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All products tested for CHOICE are bought randomly in the marketplace and no samples are accepted. Evaluations are based on tests, trials and expert judgments as appropriate. These findings should not be applied to models other than those nominated in CHOICE. We do not necessarily evaluate every available product or service in a particular class. We check the results of our tests just before publication with manufacturers, but specifications and quality may vary. If this issue is no longer current check with us or the manufacturer to determine if important changes have taken place before you buy. If, despite our extensive checking, a mistake slips through we will publish a correction as soon as possible.

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GENERAL MANAGEMENT

The Association is managed on a day-to-day basis by a committee comprising the four department managers and a staff-elected representative.

Editorial

A PART FROM keeping consumers informed through CHOICE, the Consumers' Association is also a strong advocate for consumer rights. For the past two years our Policy and Public Affairs department has made life insurance one of its priority targets.

This industry is important, as most of us have superannuation, need life insurance and would like to save money. Yet letters from aggrieved policyholders have constantly informed us of problems with life insurance companies.

The aim of our campaign is to create an efficient industry which acts in consumers' best interests. It gathered momentum when the Trade Practices Commission conducted a study of the industry last year. The Consumers' Association worked closely with the TPC, which collected statistical information to show the extent of the problems. This revealed that about 250 000 consumers each year are sold life policies which are poor investments given their needs. Many other consumers chose the right type of policy, but bought ones with excessive fees. The most frequent problems are with savings plans, personal superannuation policies and life policies with bonuses.

While your life agent may be a nice person, he or she is still working for a life company, and you're paying for the 'advice' through hidden commissions. You may well be better off paying a fee to an independent financial adviser and saving money on commissions.

The Consumers' Association will continue to work towards a life insurance industry that looks after consumers as well as itself.

*Louise Sylvan
Manager, Policy and Public Affairs*



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The telecommunications industry is changing rapidly due to new technology and restructuring. We explain what the changes will mean to you, and compare Telecom and Optus in their early rivalry.

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Up-front fees for credit cards seem likely to get the go-ahead, theoretically in exchange for lower interest rates. But will lower interest really offset the effect of paying fees — and how long will the lower rates last anyway?

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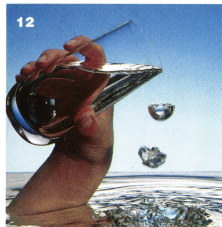
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April, May, June

Tests: Televisions, flued gas heaters, shampoo vacuum cleaners, sewing machines, fridges, low-alcohol beer, perfume, exterior paint, long-life light bulbs, electric wall ovens.

Features: Recycling review, children's car seats, asthma management, insurance dispute review scheme — is it working?, what it costs to get a product into a supermarket, how different types of heating compare, school canteens, privatisation, slimming products, glues, hiring tradespeople.

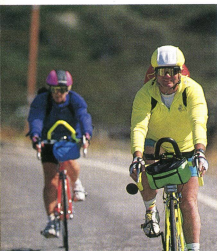


CHOICE CUTS

Cycling

ON YER BIKE!

CHOICE trialists and staff will be among the 3000 expected riders in this year's Roads and Traffic Authority Big NSW Bike Ride, organised by the Bicycle Institute of NSW in aid of multiple sclerosis.



They'll be pedalling from Port Macquarie to Sydney, through river valleys, rainforests, dairy country and vineyards—a total of 538 km over nine days, from March 27 to April 4.

Apart from a pair of willing legs, all you need to join in is a bike in good condition with a good range of gears, a helmet, camping gear and an entry fee of \$340. This gets you free panoramic views, plenty of fresh air, all campsite facilities and wholesome meals as well as carriage of your luggage.

The Bicycle Institute hopes the ride will raise \$300 000 for multiple sclerosis. CHOICE will be reporting on how a set of hybrid bikes rises to the Big Bike Ride challenge in our August 1993 issue.

The closing date for entries is February 25; contact The RTA Big NSW Bike Ride, GPO Box 272, Sydney 2001, or phone (02) 212 5628.

Made in Australia

BORN OR MADE?

MUCH OF Australia's shoe manufacturing has gone offshore—so it was with pleasure that a CHOICE reader finally bought a pair of RIVERS men's shoes which appeared to be made in Australia. But on further inspection doubts arose. The packaging does not proclaim clearly "Made in Australia". Instead there are these three claims:

- "Rivers Australia".
- "Rivers Traditional Australian Co".
- "Born in Ballarat, Victoria, Australia".

Rivers is part of the old Paddle shoes empire. The managing director, Geoff Quick, confirmed these particular shoes were made in Australia. "About 90% to 95% of our shoes are made in Australia, at our factory in Ballarat." The company imports some shoes which cannot be made competitively here. They come from a range of Asian countries and are stamped with the country of origin; there's also a swing tag labelled "Rivers Import Collection".

Strange that it's easier to be sure of the origin of the imported than the locally made product.



Software pricing



HARD FACTS ON SOFTWARE

IMPORTERS of computer software have long justified higher prices in Australia on the grounds of the cost of providing after-sale service. The Consumers' Association has believed for some time that this is a flawed argument, and the results of our software survey back up this view.

We received over 600 replies to our survey, which the Prices Surveillance Authority analysed as part of its recent report on software prices. The PSA inquiry found Australian retail prices of imported software were 49% higher than in the US. The main Consumers' Association survey findings were:

■ Almost two thirds of respondents said they'd prefer to have the option of forgoing dealer or supplier support in exchange for lower prices.

■ More than half had an alternative avenue of support, and of these, almost two thirds thought

their alternative was better than or at least the same standard as the dealer/supplier support.

■ Over a third of respondents reported having problems with the software, and of these, just over half said they overcame the problems either without assistance or with non-dealer help.

The PSA commented on the report: "[It] suggests that there may be a high demand for technical support being unbundled from the purchase price" and "The survey suggests that software, in general, is not very reliable."

The results are subject to a number of limitations—the response rate was low, and those replying may have held strong views one way or another on software. Nonetheless, the survey provides evidence that consumers are not getting—or do not need—the after-sale service the higher software prices are claimed to cover.

Consumer affairs

NEW AWARD FOR CONSUMER ACTIVISM

THE FEDERAL Minister for Consumer Affairs, Jeanette McHugh, is looking for someone who has stood up for consumer rights. What's more, she's looking all over Australia, like Cinderella's Prince, with \$1000 in cash and a special plaque to slip to the winner.

She's called the prize the 'Syd Einfield Active Consumer Award', naming it after the very popular and influential Minister for Consumer Affairs in NSW, who was in office during the 1970s and early 1980s.

"The kind of achievement I have in mind could concern pricing at the local supermarket, for example," says Ms McHugh. "It could be the removal of unsafe products

from sale or excessive and unnecessarily expensive packaging. It could include forming a local pensioner buying co-operative or mounting a local petrol price watch.

"The achievement must be by an individual or a group of individuals acting locally, as distinct from mainstream organisations which work on a broader canvas," added the Minister.

Nominations, which close on February 20, 1993, should be sent to Ms McHugh, Minister for Consumer Affairs, Parliament House, Canberra ACT 2600. The winner will be announced on World Consumer Rights Day, March 15, 1993.

Have a go!

WORDS FAIL THEM

GETTING a home loan brings most of us face to face with one of the great treasures of the English language: the mortgage document. Here's a recent gobbledegook winner from the State Bank of NSW (can you guess what this condition means?):

"The Mortgagor irrevocably appoints the Mortgagee and also assigns of the Mortgagee severally to be the true and lawful Agent and Attorney of the Mortgagor with full power at any time hereafter at the cost and charge of the Mortgagor and either in the name of the Mortgagor or the Mortgagee to take all such steps and proceedings and to do and execute all such acts deeds and things which the Mortgagee is required to do under this mortgage and the memorandum referred to in clause (a) (5) above and for securing or defending or perfecting this mortgage and generally to do perform make and execute all such further and other acts matters things and payments which shall become nec-

essary or be regarded by the said Attorney as necessary for more perfectly securing the payment of the moneys hereby secured as that term is defined in the Memorandum referred to in clause (a) (5) herein or as expedient in relation to the mortgaged premises as effectually as the Mortgagor could or might do the same and for all or any of the purposes aforesaid from time to time to appoint any substitute or substitutes and such substitute or substitutes at pleasure to remove."

Loosely translated this means that if the borrower doesn't keep his or her side of the bargain then the lender can step in and do what's necessary, including ensuring the property is kept in good condition and the amount of the loan (including interest and any charges) is eventually paid and not lost.

Perhaps someone should step in and help the State Bank of NSW do what's necessary to put its consumer loan documents into Plain English.



Community consultation

HAVE YOUR SAY ON WATER

IF you want to make sure 'community consultation' means what it says when it comes to planning the nation's management of its water, it looks like you're going to have to initiate the contact.

The Australian Water Resources Council, a national body concerned with water, has been busy preparing a glossy brochure entitled *National Water Quality Management Strategy*. It looks at rural water use, protection of groundwater, trade wastes into sewers and so on.

The Consumers' Association is concerned that the community has

not been consulted in the preparation of these strategies. This is where you come in. We suggest you call your local water supplier and ask some searching questions.

Ask them what they are planning for the future in your area: are costs changing? how will you be charged? is the quality of water likely to change? how are they dealing with pressure on the environment?

If you want your say and haven't been asked yet — tell them what you think and what your concerns are. Good luck! We hope they listen.

FULL OF EASTERN PROMISE

Ingredient: refined wheat flour, white granulated sugar, refined table salt, cream, milk powder and so on.

Shantou Jinyuan Luyou Shi Pin Gongying Gongsi
Add: 6 Lane 4, Xingyuanli, Jinjing South Road.
Tel: 543592 543596.

READ the biscuit label above. Does 'and so on' hint at:

- A. Things which stray into the mix without identification by the manufacturers (rat droppings, impurities from machinery, etc)?
- B. Closely guarded secret ingredients known only to the makers?
- C. A poorly paid clerk who learnt

a few stock phrases in English classes at school?

We can't really say, but one thing's for sure, it's definitely not the sort of truth in labelling we're campaigning for! B O'R of Kings Park, NSW, was handed the biscuits on a flight within China; as he comments, "It could cover a multitude of sins."

CAN YOU HELP?

WHAT'S IN AGRICULTURAL CHEMICALS?

THE Consumers' Association is lobbying manufacturers of chemicals used in agriculture and for animals to disclose full information about them — this means they should tell us what's in the products they sell, and not withhold any information they have on the toxicity of the product or its ingredients.

We need information on a number of substances which will be covered by new legislation being debated in Parliament. We're interested in your experiences with:

- Pet care products.
- Diazinon — in pet or gardening products.

We'd like to hear of any side-effects you, your animals or your family have suffered — and also if you've used the substances and had no problems. Write to Agricultural chemicals, CHOICE, 57 Carrington Road, Marrickville 2204. Please include a daytime telephone number in case we need to contact you for further details. Thank you.

GARDENING PENPALS WANTED

CALLING globally minded green fingers. Would you like to exchange experiences with gardeners in Britain? The UK consumer publication, *Gardening from Which?*, is setting up a penpals club for gardeners across the world and reports a significant interest from UK readers in writing to gardeners downunder.

So if your green fingers like holding a pen once in a while, and you'd like to know how UK gardeners cope with hosepipe bans or ice and snow, write to: The Editor, *Gardening from Which?*, 2 Marylebone Road, London NW1 4DF, England.

UPDATE

THE ENEMY WITHIN

(CHOICE, November 1992)

In this article about allergies and intolerances we listed self-help groups in each state except WA, as the address information didn't arrive in time for publication. The address is:

Allergy Association Australia — WA Inc
3 Shark Court, Sorrento 6020.

As with all these groups, when writing please enclose a large, stamped, self-addressed envelope if you want a reply.

Competition on the line

There have been big changes in telecommunications in the last couple of years, and there's plenty more to come. It's the beginning of a revolution in the Australian telecommunications industry, brought about by the decision to introduce competition and by improving technology.

In this report we look at what's happening, how it will affect consumers, and help you exercise the new choices you have about phone services.



Cables of optical fibres (which are replacing the older copper cables) are already in place between the mainland capitals and other major cites, and eventually may go into all customer premises. A single fibre is the width of a human hair. They have the potential to transmit eight billion phone calls simultaneously, are more reliable and require less maintenance. When combined with the latest digital exchanges, the telephone network is capable of doing much more than carry calls.

Optus is installing fibre optic rings around many of our capital cities, and plans to run cables from them directly into businesses. This has many advantages, including dispensing with the need for a business to have its own switchboard. Telecom is conducting a two-year trial of the potential of fibre optic technology for residential consumers. As part of this, around 200 homes in Wollongong, NSW, will be connected to the network with optical fibre cable, which can also be used to receive TV signals.

What's going on?

RESTRUCTURING of the telecommunications industry — part of the government's microeconomic reform policy — is taking place in stages, the first of which included restructuring Telecom and dismantling its monopoly on some telephone services. It means more choice for consumers and, initially at least, some confusion. You are no longer obliged to rent your main phone from Telecom — but is it worth buying one? There are new products on the market — like packages which offer reductions on STD rates for a monthly fee — but how many calls would you need to make before they save you money? For help in answering these questions see page 11.

But the biggest change so far is the establishment of a second phone company: Optus. This company was selected by the Government to compete with Telecom. Telecom is still the only provider of basic phone services (connection to the phone network and local calls), but since November last year, some consumers can use Optus to make STD and international calls. Over the course of this year most will have this choice. Mobile phone users have had a choice between Optus and Telecom since June 1992, and in December the government licensed a third mobile phone carrier, Arena-GSM. By 1997, it's planned that the market will be completely open, and other phone companies will be free to set up business. What does this change mean for consumers?

In theory, companies competing for customers (rather than one company with a captive market) should lead to prices coming down and the quality and range of services going up, benefiting both consumers and businesses. Also, having an open and efficient telecommunications marketplace ourselves should put Australia in a good position to take advantage of opportunities to export products, equipment and expertise to the developing telecommunications market in South-East Asia.

There are signs that some of the promised benefits for consumers are already materialising. Telecom has been preparing for competition for the last couple of years. According to Peter Kelly of Austel (the Government body whose role includes monitoring the impact of changes in the telecommunications industry), "We're seeing real evidence now that Telecom is turning itself around." It has taken steps to lift its game in terms

of providing better service and focusing more on customers' needs. For example, it has set up customer help centres, which aim to have problems resolved within 24 hours, and a 24-hour fault-reporting line, and has re-educated its staff in public relations.

Says David Thornton, Telecom's General Manager of Sales and Marketing, "There was a time when Telecom treated its customers as subscribers, and didn't consider their needs. We've changed that attitude fundamentally; we now aim to meet customers' needs, knowing they will go elsewhere if they are not met."

Its competitor is also focusing on consumer needs and is determined to be a user-friendly organisation. According to Cleve Whatley, the Director of Marketing and Sales at Optus, they are building their company around the findings of research into what customers want, and their company culture around providing service to customers. So it seems likely consumers will see the quality of services continue to improve.

Prices are already lower. Telecom has been reducing the price of STD and IDD calls regularly over the past few years, and they are now significantly lower than they were five years ago. Last year it reduced connection fees and introduced discounts for pensioners. According to David Thornton, "Prices will continue to trend downwards under the influence of new work practices, new

WHAT KIND OF EXCHANGE ARE YOU ON?

Many of Telecom's new services and products — such as Flexi Plans, 0055 calls, and per second charging — are only available if your phone is connected to one of the more modern types of exchange. If your phone bill lists your long-distance calls individually, you are. According to Telecom, it's around 80% of the way through its exchange upgrading program, and all customers will be connected to a modern exchange at least by 1997.

technology and the impact of competition."

Optus has set its long-distance rates (for both national and international calls) and on average they are a bit lower than Telecom's. Its pricing structure is also simpler than Telecom's; there are fewer time and distance bands. See *Optus vs Telecom* on page 10 for a more detailed comparison of their long-distance rates. Mobile rates have also come down significantly since Optus launched its mobile service in June last year: Optus set its rates lower than Telecom's, which lowered its in response, then Optus dropped its rates lower again.

While it's likely a lot of these changes would have happened anyway — advances in technology have made new services possible and lowered the costs involved in providing services — competition is probably speeding them up.

Will all consumers benefit?

IT SEEMS LIKELY all consumers will get some benefit from the introduction of Optus and other phone companies, but not necessarily to the same degree. As Optus is only providing a limited range of services, Telecom retains a monopoly on a large chunk of the market. So clearly, consumers who make few long-distance calls and don't use mobile phones won't gain much from reduced prices for these services. Also, long-distance and mobile phone calls are the most profitable area for telephone companies, so there's some concern that as competition drives prices closer to costs in this area, Telecom may need to increase the price of local calls, which it says is currently not a profitable part of its business. At the moment, however, any price increase would be limited by

the Government's price controls (discussed later).

Another worry is that rural and isolated consumers — who also represent an unprofitable area of business — will be disadvantaged in terms of pricing and quality of service. To some extent, these consumers are protected by the universal service obligation (USO) set out in the Act covering telecommunications. This says all Australians are entitled to have reasonable access to a standard phone service and payphones. The Government has made Telecom responsible for doing the work required to meet the USO, and Optus is obliged to contribute a certain percentage of the costs involved. (When other competitors enter the market they will also have to contribute.)

The universal service obligation will

ensure that all consumers, even those living in areas where less profit will be made by the phone company, will get reasonable telephone services. Those in remote areas or places where laying cables is difficult won't be charged the real cost of being connected to the phone network.

The Consumers' Telecommunications Network's Gerard Goggin thinks the standard set by the USO is too low. For example, a standard phone service is currently defined as a phone with a standard handset and a voice-grade line. "A voice-grade line is very limiting to people in rural areas," he says, "as they are increasingly using phones for data transfer (such as faxing) and will need data-grade lines in the future." However, Austel argues the cost implications of upgrading the entire rural network are enormous, and such an obligation would threaten the profitability of both companies.

Gerard Goggin is also concerned that the USO's focus is on avoiding geographic disadvantage, where it would

have been better to encompass other causes of inequity (such as hearing impairment) by defining the obligation as being to ensure all Australians have reasonable access to a phone service that meets their needs rather than to a particular piece of hardware.

The USO doesn't mean all Australians will get the same quality and range of services. Small rural communities will be the last to get access to the new choices competition has already brought many city-dwellers. Even when they get the chance to use Optus, they'll miss out on the extra discount it is offering on calls between cities with a lot of phone traffic. It seems likely that, as these 'thick' routes (such as between capital cities) are the most profitable, prices for calls on them will go down much faster than those between 'thin' routes (such as to and from small towns), and greater price differences between them will develop.

Austel has responsibility for monitoring how well Telecom is fulfilling its universal service obligation. It also pro-

vides other checks on detrimental effects of competition. Its role includes guiding the industry through the current changes, promoting genuine competition and protecting the interests of consumers. It also monitors the general quality of services provided by both phone companies by collecting information from them — such as how often faults have occurred, how quickly they were fixed, how long it's taken for a phone to be connected after it was requested — which indicate how the quality is being affected as the telecommunications industry changes. The information is provided on a regional basis, so Austel can keep track of what's happening in remote areas. If problems or inequities show up it will ask for explanations.

It is also monitoring whether costs are going up or down, by region. Telecom (and Optus) must get approval from Austel before increasing prices. For the moment, it's likely the cost of basic services will continue to fall in real terms. The Government set price control arrangements in place some years ago, one of which was that increases to the price of connection fees, phone rental and local calls are capped at 2% less than the CPI rate (so if the inflation rate is 3%, these prices can't increase by more than 1%; if it is less than 2%, they must go down).



The Telecom Touchfone 200 — probably a reliable buy for \$89, but you'll find dozens of other models on the market. We plan to test some of them soon.

SHOULD YOU BUY YOUR OWN PHONE?

UP TILL JULY 1991 you had no choice about who provided your first phone: you rented it from Telecom as part of a package deal which also included connection and wiring, fixing any faults in the line, and repairing or replacing the phone if it broke.

Now there is some choice:

- You can buy a phone from Telecom or another supplier, and return your rented one to Telecom. Your phone service bill will be reduced by \$2.50 a month (\$30 a year), and you will be responsible for getting the phone fixed if you break it or it develops a fault, and for upgrading it as technology changes.

- You can continue to rent from Telecom, but agree to bring the phone to a Telecom Centre for free repair or replacement if it becomes faulty. Under this agreement, your rental will be reduced by \$1.25 a month (\$15 a year).

- If you don't take up either of these options, your arrangement with Telecom will remain as it is now: they come to you to fix or replace your phone for free if it is faulty, and your bill for service and rental stays the same.

With all three options, Telecom remains responsible for detecting whether a fault is with the phone itself or with the line or exchange. If it's at their end, they'll always fix it, whatever you decide to do about your first phone.

So are the first two options a good deal? Tony Robinson, Telecom's Marketing and Communications manager, says less than 10% of people have taken them up. This could reflect general satisfaction with the existing service, or that the potential savings aren't significant enough to overcome consumer inertia, or both. But the options are worth considering.

Some of the factors you would have to

take into account are the cost of buying and maintaining a phone, the likelihood of it failing, how easy it is to get it serviced, how convenient it would be to take a phone in for repairs or to be at home for a technician to come to you, what sort of features you want on a phone.

Phones range in price from the very cheap (K Mart sells one for around \$10) to executive models costing several hundred dollars and incorporating features like a built-in answering machine or clock and hands-free operation. The standard Telecom model — the Touchfone 200 — costs \$89. If you bought one of these it would take you three years before the money you save in rent equalled the price paid for the phone. With a \$40 phone it would only take a little more than a year to recoup the cost. Provided nothing goes wrong with it, you'd be saving \$30 a year from then.

How likely it is that something will go wrong is a question we can't answer definitively. Unfortunately, we're not able to test phones for reliability — like all electronic equipment, it's impossible to assess the probability of a particular model developing a fault over time by testing a small sample. There are several things that can go wrong

If you want to use Optus for long-distance calls, how do you?

NOT EVERYONE has access to Optus yet — you need to be connected to one of the more modern computerised exchanges. Telecom's local exchange network is being updated progressively, so access to Optus for long-distance calls is being introduced in stages in line with this work. Canberra, Sydney and Melbourne already have access, and by the end of the year all the capitals (except Darwin) and many major towns will have. It's expected that everyone will be able to use Optus by the end of 1997. You only need access in your area, not the area you are calling.

If you are on the right kind of exchange, no changes need to be made to your phone, cabling or phone number. At the moment you simply dial '1' before the international or area code. The call is relayed to your local Telecom exchange, which recognises the '1' and transfers the call to the nearest Optus exchange. If it's an international call, it's relayed to Optus's international gateway exchange at Rosebery in Sydney, then on to the destination country via satellite or submarine cable. If it's a call within Aus-

tralia, it's transmitted from the Optus exchange along either Optus or Telecom lines to the local Telecom exchange, which connects it with the phone you're calling.

Your local Telecom exchange also records your phone number, and passes it

on to the Optus exchange. The first time you use Optus, it will obtain your name and address from Telecom, so it can bill you. Optus pays Telecom a fee for every minute an Optus caller uses its lines.

Austel is concerned that having to dial an extra digit to access Optus will be a disincentive to potential customers and put the company at a commercial disadvantage. It has considered several options for overcoming this, and decided on a ballot where consumers nominate which company they want as their primary provider of long-distance calls. After some



When Optus becomes available in your area you'll receive a kit like this and see adverts in the local media.

with phones, however, such as faulty connections to the receiver or body of the phone, and the pushbutton mechanism can wear out.

According to Telecom, most of the problems with the standard phones it rents out are due to accidental damage or mistreatment — for example, dropping the phone, spilling a cup of coffee on it, ripping the cord out and so on. Lightning strikes to the lines are another major cause of damage. Telecom also receives a surprising number of call-outs for 'problems' like people not noticing they'd knocked the socket out of the wall, or forgetting they'd turned the volume down then thinking the phone's broken when it doesn't ring loudly!

Telecom phones are built to last a long time. Says Tony Robinson, "Changing technology is overtaking the life expectancy of our phones." Most of the old rotary dial phones are still going strong — as Telecom replaces them with modern pushbutton phones with more features, the old ones are being sold to Russia. The models Telecom sells are identical to those it rents out, and come with a one-year warranty. If you're not accident-prone, nor have a house full of unruly kids or pets, buying a Telecom phone seems to be a safe bet. If something did go

wrong, there's a good chance that, in cities and towns at least, a Telecom service centre or agent will be fairly accessible to take it for repair.

It's more difficult to comment on the quality of phones from other suppliers, as we don't have enough knowledge or experience of them — our planned test should provide some answers. However, if you're choosing a phone make sure it comes with a warranty (preferably 12 months or more) and that after-sale service is available and easily accessible. This is less important if you're buying a \$10 phone, as it may be cheaper and more convenient simply to buy another one. It also seems probable — because the components used to make them will be cheaper — that the cheap ones are more likely to develop faults and have a shorter life than the more expensive ones.

It's a good idea to ask to try the phone in the shop, as they do vary in voice quality and clarity, depending on the quality of the microphone and earpiece components. Remember to check the phone you buy has an Austel approval number, as it's illegal to plug an unapproved phone into the Australian telephone network. If you do, you could be fined up to \$12 000.

negotiation, both companies have agreed in principle to this process and are working out the details.

You will still be able to use either company: your long-distance calls will be directed automatically to the one you nominate in the ballot and if you want to use the other (for example, to take advantage of a particular deal) you will just dial an access code before the area code.

According to Austel's Peter Kelly, the ballot will be supervised by an independent body. People who don't respond will remain Telecom customers, but it's been agreed that a certain response rate must be reached. If it isn't those who didn't respond will be asked again.

It's scheduled to begin in the middle of this year, with those who already have access to Optus being asked to make their choice first. Says Peter Kelly, "We'll see a lot of advertising in the lead-up to the ballot. Austel will ensure that the right information is getting out, that there is no misleading information and that people can make an informed choice." Although many of the details are still being finalised, he says there is an in-principle agreement that people can change their choice at any time with a minimum of fuss.

Optus vs Telecom: which is cheaper for long-distance calls?

WHEN OPTUS launched its long-distance service in November last year, the ads came thick and fast, each company claiming to be cheaper. While neither company is keen to start a real price war, both have come out fighting. Optus seems determined to capture a significant share of the market, and Telecom is equally determined to hang on to as much as it can.

As to which is cheaper, it's not possible to generalise. It depends on what time you're calling, where you live and how often you call. For standard rates, both

companies are cheaper than the other at different times of the day, sometimes just a little and other times a lot. Both companies also have special rates, which for some consumers mean cheaper calls. Telecom has Flexi-Plans, where for a set fee you get discounts on long-distance rates or extensions of the times when cheaper rates already apply (see *Flexible pricing packages — are they worth it?* for an analysis of some of these). Optus charges lower rates for all calls between 10 Australian cities — all the capitals

plus Newcastle and Geelong — and to 10 other countries.

Both companies charge STD calls per second. Until late last year Telecom measured calls in units of time, which varied in length depending on the distance being called, time of day, and day of week. You were charged 25 cents for each unit, or part of a unit, the meter registered. With the new method you will be charged for the exact length of time you are on the line (to the nearest cent), plus a 12 cent flat fee per call. Optus measures calls in the same way, and charges a 10 cent fee.

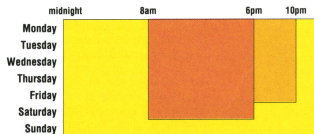
We've tried to simplify the comparison between the two companies' rates, using the graphs below — however, the graphs don't tell the full story, so it's important to read the captions as well.

NB. All our comparisons are based on Optus's and Telecom's rates in December 1992.

Telecom's STD rates in cents per minute.

The graph shows the basic rates Telecom charges at different times of the day and over different distances. You are charged for every second you are on the line, plus a 12 cent flat charge on every call. Telecom offers its cheapest rate — the economy rate — at times when there is least demand on the network, as an incentive to make calls at off-peak times. Please note when comparing Telecom's rates with Optus's that the distance bands are different.

Distance	Day	Night	Economy
50-85 km	23.1	15.4	9.2
85-165 km	33.3	22.2	13.4
165-745 km	35.3	23.4	14.0
over 745 km	50.0	33.3	17.6

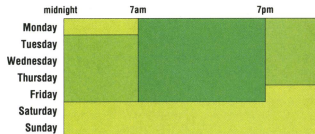


Optus's STD rates in cents per minute.

Optus has set its basic rates to be, on average, a little cheaper than Telecom's. However, at some times and between some places they are substantially cheaper and at others they are dearer (see below). Like Telecom, you're charged for every second you are on the line, but Optus's flat charge is a little cheaper: 10 cents rather than 12 cents. According to Optus, it targeted times when most people call STD — Saturday and Sunday — to be cheapest. It has a simpler tariff system than Telecom: two time bands during the week and one for the whole weekend. It also has different and simpler distance bands, which could make a difference to some people.

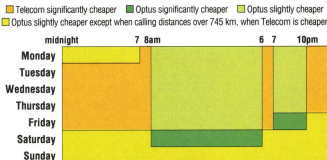
Distance	Peak	Off peak	Weekend
50-99 km	22.2 (21.0)	14.4	9.0 (8.4)
100-749 km	31.8 (30.6)	21.0 (20.4)	12.6
over 749 km	47.4 (46.2)	31.8 (30.6)	19.2 (18.6)

(Figures in brackets are special rates between 10 cities.)



Which STD rates are cheaper?

This graph shows at what times of the day each company is the cheaper. The most significant differences are on Saturday, 8 am to 6 pm, Friday, 7 to 10 pm and weekdays between 10 pm and 8 am and 6 and 7 pm. If you want to call at the cheapest possible rate, on weekdays use Telecom between 10 pm and 8 am; on the weekend use Optus, 7 pm Friday to 7 am Monday (unless you're calling over 745 km). If you want to call when it's convenient for you, use the graph on the right to select the cheapest company. For people with large STD bills, a Telecom Flexi-Plan could be another option worth considering (see right).



Flexible pricing packages — are they worth it?

TO HELP YOU see whether signing up for one of Telecom's Flexi-Plans could reduce your phone bill we've analysed some of them (based on prices as at December 1992).

Flexi-Plans are not available in all areas yet — you need to be connected to a digital exchange (if you are you'll receive an itemised phone bill, listing separately each STD and IDD call you made).

■ **Family and Friends:** For a \$3 fee per phone bill (based on quarterly billing), this Flexi-Plan gives you a 10% discount on all calls made to the five STD numbers you nominate (or four STD and one international). You'd have to make \$30 worth of STD calls to these people each billing period to break even with Telecom's standard rates — after that you'd be saving 10% on each call to one of the nominated numbers.

If you already restrict your calls to Sundays and late at night to take advantage of the economy rate, this package probably won't save you much money. If you make quite a lot of calls when the

day and night rates apply you could save, especially if you tend to have long chats or call longer distances.

Compared with using Optus, **Family and Friends** is not as good a deal, especially in certain situations. Even with the 10% discount, Telecom's rates are still dearer than Optus's if the distance you're calling is between 165 and 750 km (such as Sydney to Brisbane, Melbourne to Hobart). For other distances, particularly between cities not covered by Optus's special low rates, this Flexi-Plan could save you some money if you are a very regular caller to your five nominated numbers.

■ **STD Weekday Special:** For a fee of \$9 per quarter, this package extends the economy rate to the period when the night rate is usually charged (between 6 pm and 10pm). This will only save you money if you currently make a lot of STD calls between these hours. To cover the quarterly fee you'd need to be making around \$20 worth of STD calls during this time period. This ranges from 150 minutes of calls to distances between 50 and 85 km

away (11-12 minutes per week), to 60 minutes of calls to places 745 km or more away (four to five minutes per week) before you start saving.

Compared with Optus's rates, you'd have to make more than \$25-\$30 worth for the Flexi-Plan to work out cheaper (the larger amount if you are calling between the 10 cities where Optus's special rates apply).

■ **Weekend Plus:** This plan extends the economy period to include Saturday 8 am to 6 pm for a quarterly fee of \$6. If you have access to Optus this is not worth it, as its weekend rate — which includes Saturday — is slightly cheaper than Telecom's economy rate. If you can't use Optus, it would only be worth considering if you currently make more than \$10 worth of calls per quarter during the day on Saturdays.

■ **Total Call Saver:** For \$15 a quarter, this plan gives you a 5% discount on your total bill — local and long-distance calls — if you don't have an itemised bill. If you normally have a very large phone bill this could save you some money: your metered calls need to add up to \$300 per quarter to break even. (For example, if your calls came to \$450, you'd get a \$22.50 discount which, after you've paid the \$15 for the plan, works out to be a saving of \$7.50.) □

INTERNATIONAL CALLS

YOU can save money on certain international calls by choosing to call at certain times of the day — see the graphs below. At the end of last year Telecom extended the times it offered off-peak rates to cover Sundays, so they are now much more similar to Optus's. Optus's standard international rates, however, are cheaper than Telecom's. If you're calling to one of the 10 countries covered by its special rates — New Zealand, the UK, Canada, Germany, Hong Kong, Italy, Japan, Papua New Guinea, Singapore and the United States — they are cheaper still.

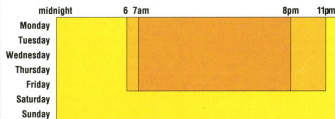
Telecom also has a range of international Flexi-Plans, known as **0011 Country Specific**. These plans — available for the UK, the US, Canada, New Zealand, Malaysia, Hong Kong, Germany, Italy, Greece, Japan, Singapore and Ireland — extend the off-peak period for calls to the nominated country for a set fee per month. At the

time of writing, Telecom expected the fee and extension periods would be changing early this year, so we haven't analysed them.

Off-peak rates are not available for calls to all countries; international rates depend on a negotiated arrangement between Telecom and each individual country. Where off-peak rates are not available, a Telecom Flexi-Plan may be worth considering. Like Flexi-Plans for STD calls, it will only save you money if you make enough calls for the savings it offers to more than cover the fee involved.

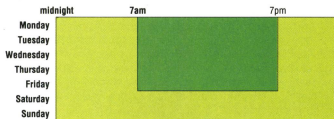
Telecom's other international plan is the **0011 World Bonus**, which gives you a 2% discount on all international calls for \$12 a quarter. You'd need an IDD bill of \$600 quarter just to break even on this plan.

Telecom



■ Peak ■ Off peak ■ Depends on which country you're calling — see front of White Pages.

Optus



■ Peak ■ Off peak

WATER FILTERS

For improving the taste and colour of water, 'jug' water filters are fine. But don't expect much more. And don't let them become a breeding ground for bacteria.

AT LEAST two-thirds of your body is made up of water and you need to consume three to five litres a day to replenish what you lose. Not surprisingly, facts like these pop up in water filter advertisements, often with statements like, "Your drinking water may be poisoning you!", "It is the responsibility of each individual household to ensure that we provide safe drinking water for our families," and "Some substances [in tap water] are known to be carcinogenic."

These are the hard-sell lines to push people into buying water filters. The softer approach asserts they will make your water taste better and hence your tea, coffee, soups, sauces and cooked vegetables — not to mention claims that ice cubes become clearer, plants stay healthier and cats and dogs start drinking more. "With their sharp sense of taste

and smell, animals can certainly tell the difference."

So should you be worried? Do you need a water filter? Information given to us by various major water authorities and our own tests over the years indicate there are no safety problems with tap water in most parts of Australia. But it doesn't always look or taste like it's straight from a mountain stream. See *The Clearwater Revival* below for information on what's really likely to be in your water.

TYPES OF WATER FILTER

There are a number of different ways you can purify or filter water, each with its own advantages and disadvantages. Some filters use more than one method in an attempt to get the best of all worlds. The five main methods are:

■ **Carbon:** By far the most common type,

carbon filters contain a cartridge of activated carbon (charcoal) which attracts impurities to its surface. They are very good at removing chlorine and colour from water. Many will remove pesticides and some will remove nitrate, but you wouldn't want to rely on any claims for these substances. Some contain silver, which is claimed to stop bacteria growing.

Carbon filters generally have a high flowrate and are fairly cheap to buy, but the filters need to be replaced regularly and this can get quite expensive (see the table overleaf for prices).

■ **Ceramic:** These contain 'candles' of a ceramic material with very fine holes in it. In 1989 we tested two ceramic filters and got very different results for what contaminants each would remove. The one that generally performed better had a very slow flowrate and clogged up

THE CLEARWATER REVIVAL

THE AUGUST 1991 issue of CHOICE contains a detailed article on water quality and treatment, including tests of tap water in nine Australian towns and cities. While these tests only gave us a snapshot of what was in the water on that day in those places, they did indicate an overall view of the state of the nation's water and an idea of what might be in it. The following is a summary:

■ **Bacteria** in water come in all shapes and sizes, some of which are harmful to people and others which aren't. National Health and Medical Research Council (NHMRC) drinking water guidelines state there should be no faecal coliforms (an indication the water has been contaminated by some sort of excrement) in any 100 mL sample. It also says the level of bacteria in general should not exceed 100 per mL. Using standard tests, we found all samples were below this level in all areas tested.

■ **Chlorine** is added to water to kill bacteria. In many cases it is responsible for the taste and odour of tap water that some people dislike. A recent study reported a possible link between chlorinated drinking water and an increased incidence of certain cancers. This is ascribed to chlorination by-products such as chloroform, a trihalomethane (THM). The current Australian guideline for THMs of 200 micrograms per litre is double the US standard and eight times that in Germany. In our 1991 test, we found all the samples had THM levels below the Australian guidelines, but two samples were below this level in all areas tested.

■ **Fluoride** is also added to the water in some treatment plants. It helps prevent tooth decay but is also accused of causing cancer and genetic mutations. However, these are usually the result of high doses of fluoride and there is no firm evidence to connect fluoridated water with these problems.

■ **Metals** such as cadmium, copper, lead and zinc can leach into the water from pipes (domestic and mains). Cadmium and lead are both considered a health risk. Small amounts of each were found in a couple of samples in our 1991 test, but they were within the limits of the guidelines. Aluminium is used extensively in water treatment systems. A high intake is thought to be hazardous only to premature and newborn babies and people undergoing dialysis.

■ **Colour** can get into the water either from the source (such as a muddy river) or the pipes. The former (known as turbidity) is not only aesthetically unpleasant but can shield micro-organisms from the effects of disinfection. The latter is not considered a health problem.

■ **Pesticides** can be a problem in rural areas where they get into the system from farm run-off. Most degrade rapidly in the environment, but the NHMRC lists six which are most likely to persist in water — chlordane, dieldrin, DDT, heptachlor, lindane and 2,4-D. We tested water from three rural areas in 1991 and found no trace of pesticides in any of them.

■ **Nitrates** are most often found in bore water, either naturally in some arid areas or as a result of local fertiliser use. A survey of subscribers last year found nitrates only a problem in a few outback areas of Western Australia and the Northern Territory.

So yes, there can be nasty things in your water (particularly in remote areas) but for the most part they are too dilute to poison you or your family. Most of the filters in this test can only be relied on to remove taste, odour, colour, chlorine, and perhaps suspended solids, copper and lindane. If you just want to remove the chlorine taste from the water you can fill up a jug and let it stand for a while — the chlorine compound will evaporate.

easily. Ceramic filters are generally priced in the \$100 to \$500 range.

■ **Distillers** are bulky, slow and expensive (\$500 to \$700) but are good for removing most contaminants including bacteria. They work by boiling the water and condensing the steam. Although no parts need to be replaced regularly (such as cartridges), they do need a fair bit of electricity to run.

■ **Ion exchange** resins may be used by themselves in filters or in addition to carbon granules. Depending on the resin used, they remove positive ions (metals like lead and copper) or negative ions (such as fluoride and nitrate). Some remove both sorts of ions. Ion exchange filters (without carbon) cost around \$150 to \$200. However, when resin is used with carbon filters, they are no more expensive than other carbon filters.

■ **Reverse osmosis** filters pass water through a thin membrane, which physically stops the large contaminant molecules passing through. These contaminants are then washed away, so getting a litre of water out requires putting around five litres in. They are very effective at removing contaminants, but quite slow.

Reverse osmosis filters are also quite expensive (\$250 to \$800) and the membranes need to be replaced every two to three years, which isn't always cheap either.

PROFILES

Prices shown indicate the range found in nationwide checks in November 1992. See the table for which contaminants each filter removed.

AQUASPACE CARAFE

Price: \$95

Comments

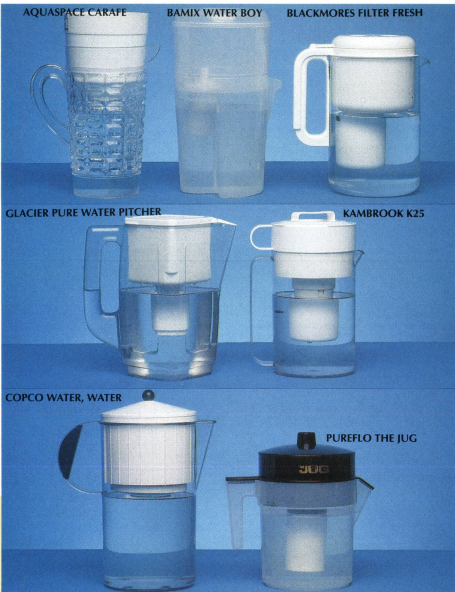
- Best performance of all filters tested.
- Removed nitrate very early in its life but performance quickly dropped off.
- Performance on lead and cadmium was very erratic.
- Very long filter life claimed (2000–3000 L); this could not be tested but we're dubious about using a cartridge for that long because of potential bacterial growth.
- Replacement cartridge very expensive (\$75–\$80).
- A tall unit that may not fit in some fridges; could also be easily knocked over.

BAMIX WATER BOY

Price: \$30

Comments

- A little unfiltered water leaked past cartridge into bottom jug.



- Top funnel not a very positive fit.
- Large hand grip would be difficult for people with small hands.
- A tall unit that may not fit in some fridges.

BLACKMORES FILTER FRESH

Price: \$50/\$65

Comments

- Was the only filter to remove nitrates for most of its life, although its performance was dropping off at the end of its life.
- Very difficult to change cartridge — requires a screwdriver or similar to prise it out.

GLACIER PURE WATER PITCHER

Price: \$13/\$28

Comments

- Removed copper and mercury very early in its life but performance quickly dropped off.
- Very slow, takes over 20 minutes to filter one litre.

- Filter blocks up readily — not suited to water with a high level of suspended solids.
- A little difficult to change cartridge.
- Handle moulding uncomfortable to use.

KAMBROOK K25

Price: \$17/\$30

Comments

- Slower than most: takes approximately seven minutes to filter one litre.
- Uncomfortable handle.

COPCO WATER, WATER

Price: \$30/\$50

Comments

- A little difficult to remove top funnel.
- A tall unit that may not fit in some fridges.

PUREFLO THE JUG

Price: \$20/\$36

Comments

- Filter blocks up readily; not suited to water with a high level of suspended solids.

WATER FILTERS

			1	2	3					
	Brand/model (in rank order — equal within groups)	Manufacturer/ distributor	Origin	Jug price (\$)*	Replacement filter price (\$)*	Claimed filter life (L)	Height (mm)	Width (mm)	Capacity (L)	Flow (L/min)
	AQUASPACE Carafe	The Water Shop	USA	95	75/80	2000-3000	280	130	1.3	
	BAMIX Water Boy	Bamix	Germany/Switzerland	30	7	60-100	290	155	1.6	
equal	BLACKMORES Filter Fresh	Blackmores	Germany	50/65	10/12	40-90	245	145	1.6	
	GLACIER PURE Water pitcher	Glacier	USA	13/28	7/10	370	245 (c)	135	2.2 (c)	
	KAMBROOK K25	Kambrook	China	17/30	8/10	100	250	135	1.5	
equal	COPCO Water, Water	Unknown (B)	USA	30/50	15/17	135	300	150	2.0	
	PUREFLO The Jug (A)	Filtration	Australia	20/36	7/10	100-150	235	155	1.6	

* Prices shown indicate the range found in nationwide checks in November 1992.

(A) Now called Filter Jug. Manufacturer says design of jug is different but the same filter cartridge is used.

(B) Distributor was changing at the time we went to press.

(C) The capacity of the Glacier Pure can be increased to 3.5 litres. The height then becomes 320 mm.

(D) Filter not claimed by manufacturer to remove this contaminant.

1 REPLACEMENT FILTER PRICE

Seven dollars might seem fairly reasonable for a replacement filter, but if you're changing the filter once a month, that's \$84 a year — around three times the cost of buying most of the jugs in the first place. Ten dollars a filter is \$120 a year. This is the sort of expense you have to commit yourself to if you want one of these filters.

2 CLAIMED FILTER LIFE

Most manufacturers give two estimates of filter life, one in litres and the other in days. The general rule seems to be you use around 100 L per month. We advise you to change your filter regularly, preferably once a month, to prevent bacteria multiplying in the filter medium. This includes the AQUASPACE, which is claimed to last a lot longer than the other filters.

with untreated (unchlorinated) water. The AQUASPACE is potentially misleading in this regard, in that its box claims it can be used "in disaster areas where water is biologically unsafe", while a small-print footnote adds that the water must be treated first with chlorine or iodine.

More significantly, these filters are a potential breeding ground for bacteria. To see if bacteria would grow in the filters, we simulated a normal three weeks of use, passing three litres of ordinary tap water through each filter every day (except weekends). When not in use, the filters were stored at room temperature unless the instructions stated they should be kept in the fridge.

The water going into the filters had a small but measurable bacterial level, well below the generally accepted limit for drinking water. While some filters showed no bacterial growth at all, the water coming out of two filters showed worrying increases in bacterial numbers. Neither filter was stored in the fridge, as

All the models tested bar the AQUASPACE and BAMIX give you some sort of indicator to remind you when to change the filter, such as a sticker to write the date on. The AQUASPACE instructions say to change it when the flow becomes intermittent and doesn't improve with backwashing. The KAMBROOK has a knob that needs to be turned every day — not the best option if you're slightly forgetful. The BLACKMORES has a test strip that lets you calculate your filter's life based on your water supply.

3 CAPACITY AND FLOWRATE

This is the capacity of the bottom part of the jug. In most cases the funnel at the top has less capacity than the jug, so to fill the jug you need to fill the funnel twice. Generally this is only a mild inconvenience (between one and seven minutes for the water in the funnel to filter through). But the GLACIER

there was no mention of this in the instructions.

Since water filters have this potential for bacteria to grow in them during normal use, to help prevent this we strongly recommend you store all jug-type water filters in the fridge, wash the jug (not the filter cartridge) regularly in soapy water, and, if you don't use it for more than a day, discard the first litre or so you pass through it.

You should also replace the filter cartridge according to the manufacturer's instructions. If you think this will cost too much, don't buy a water filter in the first place. In the case of the AQUASPACE, the manufacturer claims a filter life of over 2000 L (almost two years for the average user). We're sceptical about using a filter for this long when there is potential for bacterial growth.

Of course, it's one thing to say you should keep the filter in the fridge, it's another to find room for it. None of the jugs we tested will fit in the door of a refrigerator and three (the AQUASPACE,

WHAT WE TESTED

When researching the water filter market prior to the test, we uncovered around 130 models out there — not including one of the biggest market segments, those that fit into the plumbing beneath the sink. As it's impossible for us to test them all, we had to choose one segment of the market. Manufacturers' records show jug-type filters are a significant and growing market segment. They are widely available, cheap and don't require plumbing, and as such are appealing to first-time buyers.

We tested seven jug models with recommended retail prices below \$100. They all have carbon filters, most with some ion exchange resin mixed in with the carbon. The BAMIX and KAMBROOK also have silver in their filters. We intend to publish an update with the results of testing on at least one more filter — the BRITA Aqua Export — later this year.

DO THEY WORK?

If it's the taste or appearance of your water you want to change, these filters should prove satisfactory. They all removed colour and chlorine — the major culprit in odd-tasting water. Many also managed to get rid of suspended solids (which cause cloudiness), lindane (a pesticide) and copper, but they removed little else with any reliability (see the table for details).

If you live in an area without chlorinated water and are worried about bacteria, these filters won't help you. Most don't claim to remove bacteria and many in fact carry warnings not to use them

PERFORMANCE

Colour	Suspended solids	Chlorine	Fluoride	Nitrates	Lindane (pesticide)	Copper	Lead	Mercury	Cadmium	Brand/model (in rank order — equal within groups)
✓ (D)	✓✓	✓✓	not claimed	not claimed	✓✓	✓✓ (D)		✓✓ (D)	not claimed	AQUASPACE Carafe
✓✓	✓✓	✓	not claimed	not claimed	✓	✓				BAMIX Water Boy
✓	✓✓	✓		✓✓		✓ (D)				BLACKMORES Filter Fresh
✓ (D)	✓✓	✓✓	not claimed	not claimed	✓✓ (D)			not claimed	not claimed	GLACIER PURE Water Pitcher
✓✓		✓✓	not claimed		not claimed	✓✓				KAMCROOK K25
✓ (D)		✓	not claimed	not claimed	not claimed	✓ (D)				COPCO Water, Water
✓	✓	✓			✓					PUREFLO The Jug

equal

equal

PURE takes 21 minutes for the funnel to empty; to fill the jug's maximum capacity of 3.5 L will take well over an hour. Not one for the impatient.

PERFORMANCE

Our tests were based on guidelines from the draft Australian Standard for water filters. We made up a 'brew' containing fluoride, chlorine, nitrate, cadmium, copper, lead, mercury, ferric chloride (for colour) and a form of lindane (a pesticide). This brew was used to test two cartridges of each filter over the course of 100 litres — roughly the claimed life of this sort of filter.

You're very unlikely to get a 'brew' equivalent to this coming out of your tap, as the levels of some of the contaminants were higher than is recommended in the NHMRC's guidelines for drinking water.

Some manufacturers have said their products aren't designed for such levels, only to filter 'normal' tap water. However, given the kind of hard-sell marketing we referred to at the beginning of the article ("your drinking water may be poisoning you"), and the fact that our tests were based on a draft Standard, we're satisfied they are fair to both consumers and manufacturers.

For fluoride, chlorine, nitrate and colour, the concentration of the contaminant in the brew was equal to or less than the maximum levels for Australian drinking water. The draft water filters Standard says that, in this case, the filter should reduce the contaminant concentration by 50%.

For lindane, cadmium, mercury, lead and copper, the draft Standard recommends higher concentrations be put into the brew than the drinking water guidelines allow. For these contaminants, the draft Standard

says the filter must reduce the concentration at least to the level of the guidelines.

Samples of water were taken after 2 L, 25 L, 50 L and 100 L had passed through each cartridge. This gave us a total of eight test results for each filter. If the filter met the draft Standard's requirements for a particular contaminant on both cartridges fairly consistently over the course of its life, it is given a ✓ in the table. If it did even better and removed 80% or more of the contaminant fairly consistently over its life, we've rated it ✓✓ for that contaminant. A blank means the filter didn't meet the requirements for this substance.

Because it was impossible to include suspended solids in the brew, this contaminant had to be tested separately. One sample was taken for each filter after two litres had been passed through. Our rating was determined solely on this sample.

BAMIX and COPCO) are so tall they mightn't even fit in the body of your fridge. Keep this in mind when buying a water filter.

WAITING FOR WATER

Most filters had reasonably fast flowrates to start with — two to three minutes to filter a litre of water (the notable exceptions being the GLACIER PURE, which took 21 minutes, and the KAMCROOK, which took seven minutes). However, the flowrate on all filters dropped off over time as the filters started to get clogged up.

The instructions for two of the filters — the AQUASPACE and the GLACIER PURE — suggest backwashing them (flushing water through backwards) to help clear the blockage and speed up the flowrate again. This seemed to be effective for these filters.

CONCLUSION

The best filter in this test was clearly the AQUASPACE — see the table for details of

what it removed. The manufacturer claims a long life for this filter, but we are concerned bacteria could grow in it during this time. If you changed the filter cartridge more frequently we think you would overcome this problem, but it would set you back \$900 or more a year if you changed it once a month.

Of the rest, the next four filters in our *What to buy* list are all fairly cheap to buy but can be a bit expensive to run (around \$80 to \$180 a year). Consider the running cost of these filters carefully before making a decision to buy one.

WHAT TO BUY

Brand/model in rank order	Price (\$)*
AQUASPACE Carafe	95
BAMIX Water Boy	30
BLACKMORES Filter Fresh	50/65
GLACIER PURE Water Pitcher	13/28
KAMCROOK K25	17/30

* Price shown indicate the range found in nationwide checks in November 1992.

ADD A DASH OF COPPER

A DIFFERENT sort of filter which has had some publicity recently is the KDF filter. It is made from processed copper and zinc and is claimed to be able to kill bacteria. However, accusations have been made that the copper and zinc might leach out into the water you drink and be potentially harmful.

We tested a KDF filter to investigate this accusation and found while some copper and zinc did leach into the water in early stages, the levels of these two metals were always well below the National Health and Medical Research Council's guidelines.

PLASTIC FANTASTIC OR FLEXIBLE FIEND?

CREDIT CARDS

**AND WHAT
WILL FEES MEAN
TO YOU?**

There's been a lot of publicity surrounding the introduction of fees for credit cards. The Prices Surveillance Authority report has recommended that fees be allowed, and despite Consumers' Association opposition to fees at both federal and state level, it now looks as though card issuers will soon be allowed to introduce fees for credit cards.

The introduction of fees is likely to mean many of us take a close look at the plastic in our purses and wallets — discarding the cards we don't need any more. This report will help you decide which of the cards are better binned, and which deserve a place next to your heart, as well as answering some of the more common questions about credit cards.



FEES FOR CREDIT CARDS?

The Consumers' Association says...

■ A study for the NSW and Victorian Consumer Affairs ministers found that consumers would be worse off, on average, unless interest rates fell by 2% for each \$10 charged in annual fees (for example a 6% fall in the interest rate in return for a \$30 fee). But the Consumers' Association thinks it unlikely interest rates will be reduced by this much, and is concerned that any large reduction in rates would only be short-term.

■ Fees make it harder to work out which card offers the best value, and will therefore adversely affect competition.

■ Banks argue that some card users 'subsidise' others (discussed opposite), but the card issuers' proposals are set to make a few people better off and the majority worse off.

■ The banks have argued that they want fees introduced to make their credit card operations more profitable. There will be some savings for them (as people reduce the number of cards they hold), but profits can generally only be increased at someone else's expense — and that's likely to be the cardholders'. In any case, the card issuers make a proportion of their profit on credit cards from merchant fees paid by the retailer or service provider when they accept a card. Cardholder fees seem like asking for more icing on the cake.

There's been a lot of media discussion about the introduction of credit card fees. What could they mean to me?

Card issuers have been pushing for the introduction of up-front credit card fees, arguing that those who pay off their outstanding balance in full each month, (and therefore pay no interest) are 'subsidised' by other cardholders paying high interest rates. The card issuers claim being allowed to charge fees means they can charge lower interest rates and decrease this 'subsidisation'.

So in exchange for the Government allowing card issuers to charge up-front fees we have been promised a lowering of the interest rates charged. This change means we're likely to see new credit card options with a range of different fees and a range of interest rates — from cards with no fees retaining high interest rates, to those with a relatively high fee (say \$50 per year) and 'low' rates. However, it's by no means certain all cards would carry a fee, even if allowed to do so. In the UK credit card fees were introduced in 1989; some cards still don't have fees, while others complicate matters in other ways and only charge if the card isn't used enough.

Up till now it's been fairly easy to find the best card for you. Generally, if you paid interest, then you chose one with the lowest interest rate, and if you paid

off your bill in full each month then you chose the one offering the longest interest-free period (see next question). With fees in the equation the sums become more difficult because you'll need to set higher fees against lower interest rates.

If you don't pay interest on your credit card, up-front fees clearly have nothing to offer you — you won't benefit from any lowering in interest rates. So look for a card with an interest-free period and no fee. But if you don't always pay off your card there's a small chance you could be better off. We've done the sums and produced Table 1 to help you work out the position.

How do the card companies work out the interest — and what can I do to make the best use of my credit card?

The date interest is charged from depends on the credit card you've got, and it's not simply that **BANKCARD** works one way and **VISA**, say, another — individual card issuers (for example banks) can operate the different cards in different ways. The way interest is worked out falls into two basic categories:

■ Cards with an interest-free period

Credit cards work by running an account 'accessed' by the card — in very much the same way as a cheque account is 'accessed' each time you write a cheque.

At monthly intervals, on the 'statement' date, you are sent a bill showing the state of your account, and at the same time you're given a payment or 'due' date (commonly 25 days later), by which time the card company expects a payment from you. Most credit cards treat the period between an item appearing on your statement and the payment date as an interest-free period. It's because of this the advertising material can claim credit cards can offer up to 56 days' interest-free credit (up to 31 days between the time an item reaches your account and the statement date, and then the 25 extra days before payment is due). However, this doesn't work for cash advances from your credit cards (because no interest-free period is applied to these), or if, with some cards, you don't pay off your bill in full.

Should you fail to pay off your bill in full, you'll have to pay interest. Exactly how this is worked out depends on your credit card. With some if you don't pay your bill by the end of the interest-free period, interest begins to be charged from then — that is, from the *due date* till the date of payment, calculated on a daily basis. With other cards, if you don't pay the bill by the end of the interest-free period, it's as if the interest-free period never existed — you'll be charged interest from the *date the item appears in your account* until the date of payment, again calculated on a daily basis. The first kind is clearly preferable if you don't always pay off your bill in full — it's worth checking with your card issuer which applies to your card.

TIP You can make the most of the interest-free period by arranging your spending so your expenses reach your account just after the preceding month's statement is issued. If you have more than one card with different statement dates, use the one which has longer to go before the statement date — this puts off the due date for as long as possible.

■ Cards without an interest-free period

The majority of cards have an interest-free period, and those without one usually have lower interest rates. As soon as an item reaches your statement, interest starts being charged. And even once the statement has been issued, interest continues to accrue until your payment arrives — because of this it's almost impossible to arrange to pay off your bill exactly (you can't be sure of the exact amount of interest which will be added between the statement date and arrival of your payment).

Table 1. Breakeven balances

Use this table to find how you would be affected by the introduction of a credit card fee. Find the likely fee to be introduced in the left-hand column, and the reduction in interest rate offered along the top. Where these two meet you can read off the average monthly unpaid balance above which you'll save money. For example, if your current card proposes a \$30 fee in return for a cut in interest rate of 6%, you can read from the table that you'd be worse off unless you have an average unpaid balance of over \$500 each month.

FEE	INTEREST RATE 'SAVED'							
	1%	2%	3%	4%	5%	6%	7%	8%
\$10	\$1000	\$500	\$333	\$250	\$200	\$167	\$143	\$125
\$20	\$2000	\$1000	\$667	\$500	\$400	\$333	\$286	\$250
\$30	\$3000	\$1500	\$1000	\$750	\$600	\$500	\$429	\$375
\$40	\$4000	\$2000	\$1333	\$1000	\$800	\$667	\$571	\$500
\$50	\$5000	\$2500	\$1667	\$1250	\$1000	\$833	\$714	\$625

You can also use this table to compare two cards. If card A has a \$20 fee and a 17% interest rate, and card B charges \$30 but has a rate of 14%, which should you choose? Read off the figure for a \$10 fee (ie the difference between the two fees) and the interest rate 'saved' by paying the higher fee (ie 3%). In this example you can see you'd be better off paying the higher fee with card B only if, over the year, your average monthly unpaid balance is \$333 or more.

What protection do I have against fraud if somebody else uses my card, gives me number over the phone or uses it to order by mail?

If your credit card is used fraudulently you may be liable for up to the first \$50 of use before you report the loss. However, if you've disclosed your PIN or unreasonably delayed reporting the loss, say, liability isn't limited this way.

Where it's just the number which has been abused you won't have to pay anything unless the card issuer can prove you authorised a purchase. Proof of this could be your signature on the order or, for a telephone order, having goods delivered to your address.

Ideally you should keep the customer copies of credit card vouchers and check each statement when it arrives — if you find items you don't recognise, query them with the card issuer straightaway. They then have to investigate the matter and if, after the investigation, you are unhappy with their findings you can ask to have them reviewed by senior management. If you're still not satisfied you will be informed of other avenues for dealing with the dispute — for example going to the Banking Ombudsman. While the investigations are under way you don't have to pay the disputed amounts, nor interest on them — though they will be added to your account if it is later found you were mistaken.

If I buy faulty goods using my credit card, will the card company help if the retailer is unhelpful or goes bust?

The first responsibility for unsatisfactory goods or services lies with the retailer,

but if they have gone bust you may in some circumstances be able to turn to the card company for redress. In the ACT, Queensland, NSW, Victoria and WA credit providers are covered by Credit Acts which say they can carry liability if the retailer or service provider has also arranged the credit. However, whether or not using your credit card is enough to establish this link is not clear. Despite this the credit card providers may compensate cardholders in some circumstances — in particular if the retailer is taking orders by phone or mail. If you've had problems with a retailer going bust, you'll need to apply in writing to your card issuer, but it's by no means certain you'll get compensation; for example, although credit card customers of the failed Compass airline could get compensation, customers of lower-profile businesses may not be so lucky.

I keep forgetting to send off my payment in time — and so pay interest. Is there a way I can set up an automatic payment to pay off my card each month?

Although some cheque accounts offer this facility, generally it isn't an option. Automated payments are usually for the minimum payment only (often 5% or 10, whichever is higher). Obviously paying just the minimum means you can quickly build up a high balance on which you pay interest each month. Even with the current trend to lower interest rates, those on credit cards are still high, and clearly it is in the commercial interests of the card companies not to have cardholders pay off their accounts in full — and so pay interest. In consumers' interests we think it's time automated payment of the full amount was made more widely available.

What are the differences between Bankcard, Mastercard and Visa — and which of the three should I have?

BANKCARD is issued by the four major banks in Australia, as well as state banks. MASTERCARD and VISA work on a franchise basis, with issuers doing their own transaction handling.

MASTERCARD and VISA are international, while BANKCARD is only useful in Australia and New Zealand — otherwise there's very little difference between the three types of card and it's the interest rates and fees for each individual card you should look at rather than the type. For more information about the use of credit cards abroad see *Travelling Money* in CHOICE, May 1992.

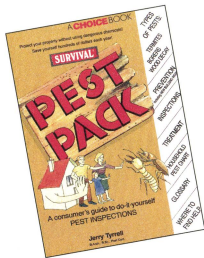
Are the interest rates really extortionate?

There's no doubt credit cards can be expensive, both because it's easy to run up a much bigger bill than you thought, and because the interest rates charged are high. In Table 2 we show what a card could cost per year for a range of average yearly unpaid balances at different interest rates. At the time of writing, credit card rates are between 15.5% and 22%, and commonly 17% to 20%; personal loans are lower (in the range of 14% to 17%) and home mortgages from 9.5% to 10.5%. However, there may be set-up fees or early repayment fees for an arranged loan, whereas a credit card offers a great deal of flexibility. This flexibility, combined with an initial interest-free period, can make a credit card a good choice for short-term credit, but as a means of continuing borrowing the current rates are high compared with other forms of credit available. □

Table 2. What a card costs you each year

AVERAGE UNPAID YEARLY BALANCE	ANNUAL INTEREST RATE								
	12.5%	13.5%	14.5%	15.5%	16.5%	17.5%	18.5%	19.5%	20.5%
\$50	\$6.25	\$6.75	\$7.25	\$7.75	\$8.25	\$8.75	\$9.25	\$9.75	\$10.25
\$100	\$12.50	\$13.50	\$14.50	\$15.50	\$16.50	\$17.50	\$18.50	\$19.50	\$20.50
\$250	\$31.25	\$33.75	\$36.25	\$38.75	\$41.25	\$43.75	\$46.25	\$48.75	\$51.25
\$500	\$62.50	\$67.50	\$72.50	\$77.50	\$82.50	\$87.50	\$92.50	\$97.50	\$102.50
\$750	\$93.75	\$101.25	\$108.75	\$116.25	\$123.75	\$131.25	\$138.75	\$146.25	\$153.75
\$1000	\$125.00	\$135.00	\$145.00	\$155.00	\$165.00	\$175.00	\$185.00	\$195.00	\$205.00
\$2500	\$312.50	\$337.50	\$362.50	\$387.50	\$412.50	\$437.50	\$462.50	\$487.50	\$512.50

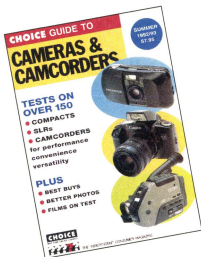
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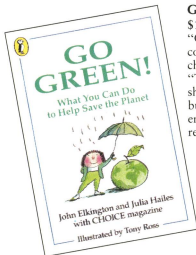
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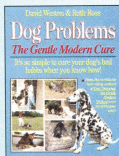
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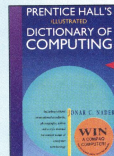
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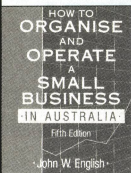
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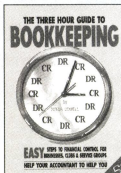


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NB: the Consumers' Association does not advocate use of the nicotine spray on p.132.



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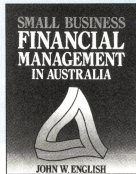
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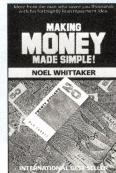
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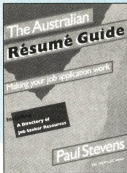
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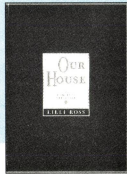
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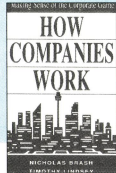
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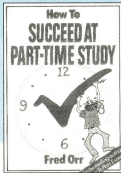
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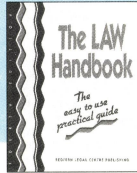
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Your super guarantee?



IN BRIEF

- Employers are now required to make contributions to superannuation funds for most employees.
- Tax penalties mean employers will be worse off if they don't make the contributions.
- Contribution rates are set to rise over the next 10 years.

The 'earnings base' used depends on a number of things, but is likely to be the same as is used for an existing award or the equivalent of earnings excluding fringe benefits and overtime. There's an upper limit of \$80 000 on this earnings base for each employee, which is adjusted for inflation each year. The table below shows the minimum percentage an employer would have to contribute to avoid paying the charge.

Worries about future funding of the age pension and our perceived inability to look after our own retirement income have led to changes in the superannuation system. These may give you a bigger income when you retire, but for now they've probably just left you confused.

In this report we explain the recent changes which affect employees, and explain the Superannuation Guarantee legislation effective from July 1992.

IF YOU'RE an employee your employer now has to make superannuation contributions on your behalf, or face the wrath of the Tax Office. In 1986 the Government/ACTU accord covering awards traded a 3% pay rise for a 3% contribution to superannuation. However, it became apparent both that 3% wasn't enough to provide the pensions required, and that many workers hadn't received the super they were entitled to — simply because employers weren't complying with the arrangement.

New rules have taken more of the decisions regarding your future super position out of your hands and placed them where the tax office can keep an eye on them. The change puts the duty to provide super squarely on the employer, by requiring employers to make superannuation contributions and punishing them if this isn't done.

The Superannuation Guarantee legislation became effective on July 1, 1992. Under this legislation employers who don't contribute to their employees' super face a charge greater than the contribution they should have made and payable directly to the tax office. This new charge underpins the other major change, which is to greatly

increase the yearly amounts employers have to contribute for their employees between now and 2002.

Who's covered by the legislation?

Basically, if you're an employee you're covered. Technically if you receive salary or wages, or if you're paid for work under a contract wholly or principally for labour, your employer will be required to make contributions unless:

- You're paid less than \$450 a month.
- You're under 18 and not working more than 30 hours a week.
- You're over 65.
- You do domestic work for not more than 30 hours a week (for example as a nanny or housekeeper).
- There are also exemptions in certain circumstances for work done overseas or by some foreign executives.

How much will my employer have to contribute?

If an employer is to avoid the penalties attached to the Superannuation Guarantee he or she must make super contributions equivalent to at least a specified percentage of their employees' earnings.

Tax year	Employer's payroll \$1m a year or less (A)	Employer's payroll over \$1m a year (A)
1992/93	3%	5% (B)
1993/94	3%	5%
1994/95	4%	5%
1995/96	5%	6%
1996/97	6%	6%
1997/98	6%	6%
1998/99	7%	7%
1999/00	7%	7%
2000/01	8%	8%
2001/02	8%	8%
2002/03	9%	9%

(A) The minimum contribution percentage depends on an employer's payroll in 1991/92 or in the first full year of trading (adjusting for inflation) if this is later.

(B) As of January 1, 1993, previously 4%.

Where will the money go?

Your employer will have to put the money into a 'complying' superannuation fund — that is, one which is registered with the Insurance and Superannuation Commission (ISC) and files returns and provides the required literature for investors. Most existing funds comply already, so it's likely your employer will simply increase contribution levels as necessary. You or your employer may want to check that a particular fund complies for Superannuation Guarantee purposes — you can do this by ringing the ISC on 13 10 60.

What happens if my employer doesn't make the payments?

For the 1992-93 year (ie from July 1, 1992 to June 30, 1993) the contributions

must be paid by August 14, 1993; in later years they'll have to be paid quarterly. If an employer doesn't make sufficient contributions the Superannuation Guarantee charge becomes payable to the tax office. This charge is equal to the shortfall plus interest if the payment is delayed (currently 10% pa to make up for the interest lost), plus an administration fee of \$50, and \$30 for each employee for whom there's a shortfall. This doesn't sound much of a penalty, but additionally this charge isn't treated as a tax deduction for the employer — whereas super contributions would be. The charge collected (less administration fee) is then paid to the employees in the form of vouchers, which can be given to a complying fund and so add to their entitlement.

What if the coalition gets in?

The Fightback package outlined significant changes that would be implemented if the Coalition came to power. These would move the emphasis back to the individual, by introducing a system of tax rebates for investment in super and freeing compulsory employer contributions at the prevailing level. □

WHAT YOU CAN DO

■ Check the chosen fund.

The choice of fund rests with the employer, and although the money will have to be paid into a complying fund, there are no Government controls on the fees charged, or the type of investments employed. However, funds taking Superannuation Guarantee contributions are likely to concentrate on investments which have a high safety factor. Advice about which fund is best for you is difficult to give, but you should look at the fees being charged both when you invest, and when you want to transfer to another fund — if you change jobs, say. In general, industry schemes will have lower charges. If you aren't happy with the chosen fund you currently have no right to have it changed, but employers don't have to make all contributions into the same fund and so may be willing to accommodate you.

■ Check the payments are made.

Checking that contributions have been made isn't easy, though you should get a yearly statement from the complying fund. If you're concerned, check with the fund trustees. For what happens if payments aren't made see *What happens if my employer doesn't make the payments?*, left. For more information ring the Australian Taxation Office hotline on 13 10 20.

ANNOUNCING

THE 7th CHOICE SUBSCRIBER DRAW

For new CHOICE subscriptions and renewals
received 1 January to 31 March 1993.

On 4 April next year, we'll be holding our seventh Subscriber Draw. The lucky winner will be able to choose any two products from the following tests published July 1992 to September 1992.

- | | |
|--|---|
| ☐ Cellular phones (July '92) | ☐ Colour televisions (July '92) |
| ☐ Electric frypans (August '92) | ☐ 300-350L refrigerators (September '92) |

These are products we bought for testing (we never take manufacturers' samples), so you won't be the first to turn them on or set them up. But we'll cover any service problems with a CHOICE warranty that'll match the manufacturers' — just as if you'd bought them new.

All new CHOICE subscriptions and renewals received from members and personal subscribers (including donors of gift subscriptions) by 31 March will go into the Draw, unless of course you indicate you don't want to be included.

(If you're not due to renew your subscription during the period, don't worry, we'll be holding other Draws during the year — your renewal notice will have the details.)

THE PERFECT GIFT

Here's where you stop racking your brains for the right present. With a CHOICE of their own, your friends can make big savings (and you may get to keep your own copy!).

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USE THE ORDER FORM OVERLEAF



CONDITIONS OF ENTRY

1. The winner will be drawn from new subscriptions and renewals from personal subscribers (including members and donors of gift subscriptions) received 1 January to 31 March 1993. If you renew or subscribe for 2 years, you get 2 chances to win.
2. Information on how to enter and prizes form part of these conditions of entry.
3. Employees, and their immediate families, of the Australian Consumers' Association and its associated companies and agencies are ineligible to enter.
4. Entrants must be residents of Australia.
5. Applications are subject to a verification check and judge's decision is final. No correspondence will be entered into.
6. The prizes will be delivered free anywhere within Australia.
7. Prizes cannot be taken as cash.
8. South Australian residents may enter the draw by completing the form and posting to Reply Paid No. 13, ACA, 57 Carrington Road, Marrickville NSW 2204, without subscribing to the magazine. Only one entry per person is permissible through this method.
9. Last date for receipt of entries to the Draw is 31 March 1993. No responsibility accepted for lost, late or misdirected mail.
10. The draw will be conducted at the office of the Consumers' Association at 10 am on 1 April, 1993.
11. The winner will be notified by letter and published in the June 1993 issue of CHOICE magazine.
12. The promoter is Australian Consumers' Association, 57 Carrington Road, Marrickville NSW 2204. NSW Permit No. T92/S245, VIC Raffles & Bingo Permits Board Permit No. 92/3210 issued on 24/11/92, ACT Permit No. TP92/1956 issued under the Lotteries Ordinance, NT No. NT92/1600.

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☐ BANKCARD	Expiry date ____/____/____
☐ MASTERCARD	
☐ VISA	

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Gift card to read: To _____

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IL 9301 INS

Consumer Rights Advice

CHOICE operates consumer rights lines for people having problems with a faulty product or a dispute with a service person. The lines set out what your basic rights are and what steps you can take to protect them. These lines are also available in four languages other than English — Vietnamese, Arabic, Chinese and Turkish.

CHOICE Consumer Rights Advice:

0055 2001

Advice in Vietnamese:0055 2000

Advice in Turkish:0055 2000

Advice in Chinese:0055 2001

Advice in Arabic:0055 2001

Youth lines

A line specifically for young consumers, the 'Ripped-off' Line, outlines your shopping rights as well as letting you know what you can do if you run into problems with something you have bought.

Students can also call a resource line to find out where to get up-to-date information on the consumer movement and the environment. These two topics are the most requested by students and teachers who ring our Consumer Information Service.

CHOICE 'Ripped-off' Line — Advice for Young Consumers: 0055 2000

CHOICE Student Resource Guide: 0055 2001

Product advice

A number of product lines also summarise what to look for when you are buying a particular product. Brand-name recommendations aren't included, however — these remain exclusive to CHOICE subscribers.

CHOICE Washing Machine Advice: 0055 2001

CHOICE Water Filter Advice: 0055 2001

CHOICE Baby Products Advice: 0055 2001

CHOICE Safer Domestic Pest Control Advice: 0055 2001

CHOICE Washing Machine Advice: 0055 2001

Other lines

A media 'hotline' provides immediate and accurate background information on consumer issues being reported in the news media, while a 'suggestion line' gives you a chance to say what you would like to see tested or researched for publication in CHOICE.

CHOICE Media 'Hotline': 0055 2001

CHOICE Suggestion Line: 0055 2001

Calls attract a rate of 55 cents per minute.

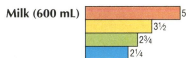
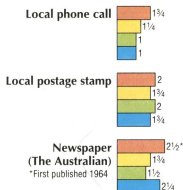


FRUITS OF YOUR LABOUR

Life might feel more expensive these days, but in fact we had to work longer to buy most things 30, 20 or even 10 years ago. We've taken a look at how many minutes, hours, days or weeks it has taken over the years to buy some common items or services. We've based this on a working week of 40 hours and average weekly earnings.

1962 1972 1982 1992

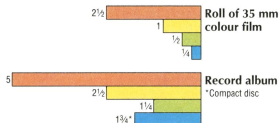
MINUTES TO EARN



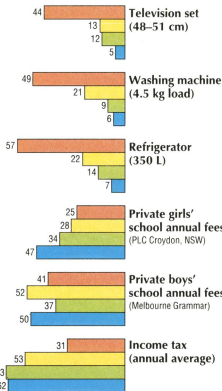
WEEKS TO EARN



HOURS TO EARN



DAYS TO EARN



MAKING A MEAL OF IT

These meals look like they're nutritionally balanced for kids, but don't rely on them to patch up a bad day's diet.

WHEN BUGS BUNNY tells you something's good only CHOICE would dare inquire, "What's up, doc?", and send it to the lab for dissection.

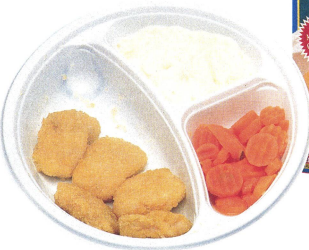
Bugs and other influential cartoon figures have been brought in to help sell LOONEY TUNES TV dinners to children, courtesy of food maker McCain. Some meal varieties come complete with dessert, all in one pack destined to ride the microwaves.

Heinz has gone down a different road towards the same destination with a more low-key range of "nutritionally balanced meals" called KIDS CUISINE. They're aimed at children 18 months and over and are definitely more sophisticated than a can of baked beans.

A well-balanced meal should be high in complex carbohydrate and dietary fibre while low in sugar, fat, cholesterol and sodium. Convenience meals don't have to be poor nutritionally. What's in this lot?

McCain LOONEY TUNES

Varieties: BUGS BUNNY CHICKEN NUGGETS with mashed potato and carrots with butter sauce; DAFFY DUCK SPAGHETTI WITH MEAT SAUCE with corn with butter sauce and choc-chip cookies; and ROAD RUNNER PARTY PIES with peas and corn with butter sauce and chocolate sponge pudding.



Market research tells us these meals are very popular — they may be the shape of things to come. There's a complete meal in three compartments on a plastic tray, including a dessert with some. A child could easily pop one of them in the microwave, though a conventional oven will do the job too.

But the nutritional balance has gone awry:

■ BUGS BUNNY CHICKEN NUGGETS and ROAD RUNNER PARTY PIES meals are too high in fat. The guideline for adults is that no more than 35% of energy in the diet should come from fat (there is no guideline yet for children): with BUGS BUNNY CHICKEN NUGGETS 58% of the energy comes from fat, and for ROAD RUNNER PARTY PIES 43%. And about half is saturated fat (the type of fat associated with cholesterol production). DAFFY DUCK SPAGHETTI WITH MEAT SAUCE has half the fat of its two stablemates.

■ They are all high in salt, contributing almost all the salt a four- to seven-year-old should get in a day. There's very little fibre here for a main meal, too — the BUGS BUNNY CHICKEN NUGGETS meal supplying a mere 10% of the preferred adult daily intake. Again, though there is no recommended intake for children, you probably get the idea.

■ At 200 grams the meal size of all the LOONEY TUNES is small — it would contribute only about one-fifth of a day's energy needs of a five-year-old. If an older child wolfs this down quickly he or she will soon be hunting for other things to fill up on.

■ We paid between \$2.20 and \$2.50 for these. That's cheap enough for a whole meal, but overpriced for so little bulk.

What's up, doc? Too much fat and salt, too little fibre, and not enough food for a complete meal for most children.



HEINZ KIDS CUISINE

Varieties: VEGETABLE AND LAMB HOTPOT, MACARONI STEAK DINNER, FARMHOUSE CHICKEN CASSEROLE, SAVOURY RICE AND BEEF, SPAGHETTI BOLOGNAISE and PASTA AND CHICKEN SUPREME.

■ Despite its faults in excess, fat is a concentrated source of energy. Very young children can find it difficult to get their required daily energy intake (and hence associated nutrients) if their diet is very high in complex carbohydrate and too low in fat, because they feel full before they have eaten enough food to get the necessary calories for the day. These meals contain insufficient fat to deliver all the energy a toddler needs, providing only approximately 15% of the recommended daily intake.

■ They are very salty, giving your child roughly 50% more salt than his or her body needs for the day, in one hit. So

Heinz Kids Cuisine meals for toddlers and small children — too much salt, but reasonable value for money.

when the label says "has less salt than other similar canned meals" and "Reduced salt", we are not convinced. Though these statements may be true in the technical sense of a comparison with other canned foods, they are misleading ultimately as these are relatively high-salt products.

■ At 99 cents each they represent good value. But you'll need to add an egg or piece of cheese to round out the meal.

TOO HOT TO HANDLE?

Parents should think twice before letting young children microwave McCain LOONEY TUNES on their own. After cooking these meals in accordance with the maker's instructions, we checked temperatures inside the foods and on the plastic plate.

If your kids rush the desserts first they may be in for a shock. The cookies were fine, but the chocolate chips were little

hot pockets at 92°C after one minute out of the oven. The chocolate pudding was even hotter, measuring 94°C after standing for two minutes. As the meals represent a range of different food types, an adult should check the food is cool enough to eat before letting a very young child tuck in. A warning on the pack would be a good idea.

ACT IN WASTE, CLEAN UP AT LEISURE

As with other convenience products there may also be an environmental price to pay in the case of McCain LOONEY TUNES with its disposable plastic plate and plastic wrap. The single-serve TV dinner is essentially a wasteful approach — it's a factor you may choose to bear in mind.

CONCLUSION

For an occasional meal these foods present no real nutrition problems, but don't rely on them to fix up the balance if the child has eaten poorly all day. If your child would finish each of these meals with a piece of fruit the balance would improve.

For difficult eaters the packaging (with game and sticker) of the McCain LOONEY TUNES meals may be a blessing in gaining your child's attention. As far as the LOONEY TUNES meals go, the DAFFY DUCK SPAGHETTI WITH MEAT SAUCE is the best nutritionally, but forget them all for a child much over the age of five or six unless you top up the meal. Within their limitations, any of the HEINZ KIDS CUISINE cans would be fine for toddlers to small children. □





CONSUMER IN LAW

VEHICLE TOW-AWAY — IS IT LEGAL?

What right does a motorist have to park on someone else's property? And what right does the landowner have to remove a trespassing vehicle and charge for its return?

IT'S BEEN called 'extortion' and 'theft' by the Scottish High Court of Justiciary, but it will take a class action in the Federal Court to determine whether car clamping and tow-away will be deemed illegal in Australia.

Various statutory bodies use car clamping and tow-away to remove cars which have been illegally parked — on clearways, for example. To get your vehicle back you have to pay a release fee and a fine — all of which can amount to more than \$200.

But the question to be asked of the Federal Court by at least 88 motorists in the proposed action is: can a private tow-away firm impose the same penalties?

Statutory bodies can tow away illegally parked vehicles because specific by-laws allow them to do so; it has not yet been established whether the same powers are legally available to ordinary citizens — to restaurant owners whose car park has been used by people who aren't customers, for example. A private firm which clamps and tows away vehicles parked without permission from private land, and which does not carefully monitor the actions of its employees, runs the risk of committing criminal and civil offences along the way. The activities of one private enterprise which began in Victoria and which is now operating in NSW have highlighted a number of issues which only a court can resolve.

ARE YOU TRESPASSING?

Common law defines trespass as 'unauthorised entry onto property occupied by another'.

A proprietor (or someone authorised to act on their behalf) has the right to remove a trespasser from private property.

Offering to 'remove the trespass' (ie your car) immediately is probably enough to avoid a charge of trespass, but does not mean a landowner cannot claim damages. The owner of the car park is



entitled to claim 'damages' if financial or other loss has occurred. And, according to ancient trespass laws, he or she can impound your car (in the old days it would have been your wandering cattle) until such time the damage is paid for.

However, the law expects there to be some actual damage caused by the thing to be impounded ('distrained' is the legal term). The landowner would have to show that damage (loss of business, goodwill, etc) had occurred, or would have occurred if the vehicle had not been towed away. Whether the expense incurred to a car park owner in calling a towing firm can be deemed as 'damage' is yet to be decided by an Australian court.

When making new law, judges are often guided by decisions made by other judges in courts overseas. A decision in the High Court of New Zealand found the cost of removing a vehicle parked without authorisation could be regarded as actual damage sufficient to allow confiscation of that vehicle until the owner of the land had been reimbursed. This particular judge said, "If a person parks a car on private property in a central city area knowing he has no right to do so and deliberately takes the risk of it being towed away, there seems to be no good reason why the occupier should not be able to recover such expenses as damages for trespass."

Whether this judge would take the same view if the motorist had no reason to believe he was trespassing is not known.

Interestingly, the NZ tow-away firm still lost its case because the motorist not only offered to remove the vehicle and to pay the towage fee, but when that offer was refused, stayed in the car and was sitting inside the vehicle at the time it was removed. The judge ruled that the tow firm did not have the right to confiscate the car while it was in the possession and care of the owner. He also found the tow-away firm was negligent — the car had been damaged — and awarded a series of damages to be paid to the owner.

BUT IT LOOKED LIKE A PUBLIC CAR PARK

In the opinion of a police department lawyer who has spent considerable time researching vehicle trespass and tow-away, where parking is provided by a business enterprise for the general public, and where there are no conditions imposed by way of warning signs, the parking facilities may be used by the public, whether or not they are actually customers of that business. It's considered that in those circumstances it would be very difficult for the landowner to argue that parking in an open parking area was restricted to its customers simply by implication. However, the question of who can park where is a civil matter and not one likely to involve the police.

On the other hand, where there are warning signs, non-customers using the car park would be classed as 'unauthorised' and would be subject to the car park conditions — which may result in the vehicle being 'distraigned' and a fee charged for its release.

For an owner or agent to establish that they were entitled to immobilise the vehicle and charge a release fee they must be able to show they took all reasonable steps to warn motorists this was private property and a 'tow-away zone'. It is arguably (in law) not enough to bring to the motorist's attention a small sign high on the wall in some dimly lit section of the car park after their car has been clamped. It would be up to a court to decide whether the notices were sufficient in the circumstances.

ARE THE RELEASE FEES REASONABLE?

"The money seems to vary from case to case — even the sign itself says \$120 to \$150. What does that mean?" — Solicitor for the class action.

According to the tow-away company, release fees in the past varied depending on the time of day, and whether

"I SHOULD HAVE GOT IN IT AND DRIVEN IT AWAY"

NEARLY MIDNIGHT on a June Friday, and Derek Poulton parked his car (as he always did) at the rear of a nightclub in Melbourne. He later reported having seen no signs at the entrance, nor did he notice any on his way into the club — although a sign standing two metres above the ground, and not facing the entrance, was brought to his attention later by the tow operators.

"Some time around midnight I could see from the rear of the club that two men were at the car. I could see a large sticker on the driver's window resembling a shopping centre sticker, and the gentlemen in question appeared to be holding a notice pad. I exited the rear of the club to 'save the car'.

"I had the keys in my hand. As I got to the car they said, 'What do you think you're doing?'

"I said, 'Well, I'm going to take the car.' Their reply was 'No, you can't. It's already been registered with the police.'

"At this stage a third man approached us (three of them, one of me). A flat-top blocked the only exit to the alleyway.

"Everyone was dressed similarly to the tow-truck driver so I assumed straightaway the gentlemen I was talking to were from the council — they had a radio or a mobile phone, matching pants and a security-style jacket. I thought, 'I've been caught by the law.'

"I said, 'Well, what's the situation?' They said, 'To get the car back you've got to pay \$150.'

"I said, 'You've got to be kidding because you've done nothing to it yet.'

"The clamp was sitting next to the wheel. Since then I've thought I should have got in it and driven it away because if they were 'the law' they would have sent me a summons. But at 12 o'clock at night you don't really think of everything.

"I could pay the release fee now and move my car, or it would be towed to the compound and I could collect it the next day for the same price. I decided to pay for it on the spot and keep the car.

"The driver of the tow truck produced a credit card machine, checked the authenticity of my signature and we parted company. At that stage I had accepted the \$150 to be legislated law, such as a parking fine.

"While this was going on I noticed the tow party seemed quite prepared for a confrontation. I questioned why cars parked further in the alleyway were not being towed and was told, 'They have a permit.'

"I spoke to council about it, and as soon as I said 'alleyway' they said, 'Oh, no, I don't think anyone would own an alleyway.'"



the vehicle was wheel clamped or towed away. It says it now charges one standard fee.

Nevertheless, while an occupier of private land may claim damages, the law does not intend he or she should profit from the situation.

Technically the tow firm is just an agent of the landowner or occupier and has confiscated the vehicle until the debt has been paid. The amount claimed is expected to be directly related to the actual damage. This means the amount charged to the owner of a vehicle should not include spotters' fees, or any commissions paid to a proprietor who phones and reports a trespass. Nor, it can be argued, should 'damages' include a profit margin for the tow-away firm.

Tow-truck operators in Melbourne say an inner-city tow costs about \$40. The cost of parking in the inner city costs about \$20 for four hours. Given these figures it's hard to see how a \$150 release fee is justified — especially if the motorist offers to remove the vehicle. At that point the landowner has only suffered 'damages' (expenses) to the extent of calling out the tow firm.

In its defence a tow firm might argue that if the council authorities in Melbourne charge \$150 towing and storage cost (as well as a \$60 fine), its release fee is appropriate.

The real problem for motorists is the seemingly unlimited amount they can be charged, which can intimidate a motorist into paying immediately because he or

she fears an argument will invoke a heavier penalty:

"He said he would charge me an extra \$60 an hour per person unless I got out of the car now and left the premises ... I told him I'd feel safer when the police arrived. He then reminded me the clock had started, and the other attendant laughed and said words to the effect of 'making a lot of money out of me'." — Motorist.

According to the tow-away firm, the person referred to attended its pound with the stated intention of paying for and recovering his vehicle. Upon inspecting the car he proceeded to lock himself in it and said he wouldn't leave it until he was allowed to leave without paying. At this time, the firm claims, he was trespassing and was asked to leave.

The tow-away firm said it informed the driver his conduct was incurring cost and those costs would be levied against him prior to the release of the vehicle.

It's up to a court to decide who is in the right in circumstances like these.

Sometimes it's not just the potential charges that are intimidating:

"He then approached my car and as he stood facing me spoke into his handheld phone, stating, 'I'm going to smash this f..... car, take him outside and smash him'. Moments later the attendant returned with two other attendants. They all looked very aggressive and proceeded to arm themselves with car clamps and flank the car. I remained silent in the car. They then opened the roller door and let H leave with her car. It was now about 5.30 pm. They closed the roller door and turned the warehouse lights off. They then proceeded to gather around the car again. C came up to the driver's side window and said, 'I told you last night, cash or credit card'." — Statement from a motorist.

The tow firm claims it has no information about this alleged incident. It says its staff are well trained and conduct themselves in a professional manner at all times.

A HOLE IN THE FENCE...

The solicitor handling the class action on behalf of the motorists reports:

"One person was in the towing yard (waiting to collect his vehicle) when another bloke in front of him offered a certain credit card. They wouldn't take it, wouldn't take his cheque, so he got in his car, drove through the fence and knocked the fence down. The second person got in his car and drove off through the hole in the fence. Two days later they came round to his house, took his car away, and charged him 300 bucks (double)."

The tow-away firm says the fee charged was appropriate for the recovery of the vehicle, which it claims was removed illegally from its pound.

This was an interesting situation for the police. The owner reported his car was being stolen, but because the police had been notified by the tow-away company it was 'reclaiming' the car, no action was taken, apart from the police visiting the owner later.

The tow-away company claimed it had the right to recapture the vehicle — and common law would appear to support this claim. However, common law also expects the recapture must be 'upon fresh pursuit' — that is, without delay — and the person repossessing the vehicle *must not commit a breach of the peace* (our italics).

The owner claims that when the tow truck arrived outside his house three of the four men who arrived with it forcibly prevented him from opening his gate, and patrolled his fence so he couldn't get out and stop the tow truck operator taking his car.

Again, whether a breach of the peace took place, and whether the tow-away firm was justified in confiscating the vehicle under the circumstances, only a court can decide.

OTHER ISSUES

■ They said my car was registered with the police ...

"I wasn't allowed to take the car because 'I was parked on private property and the car had already been registered with the police'. I immediately took it that these gentlemen were acting in an official capacity for the Melbourne City Council. I at once conceded that I had obviously been caught by 'The Law' ..." — Melbourne motorist.

The tow firm claims the vehicle is "lawfully impounded" at the point where costs are incurred as a consequence of trespass. It says it notifies the police to assist drivers in the recovery of their vehicles.

The Victorian police say they 'flag' registration numbers of vehicles towed away and/or 'reclaimed' for about seven days — mostly so they don't respond to a call which looks as if it relates to theft. It's also a service to motorists who want to know what happened to their car. However, they wish to make it known they are neutral towards car tow-away, and "neither condone nor oppose it".

■ Liability of the motorist

Motorists who rescue their vehicles from the 'pound', or who take action to avoid paying the release fee, may be committing a criminal offence or a trespass, so

it would be prudent to seek legal advice (perhaps from your motorists' association) first.

CONCLUSIONS

The legal issues surrounding any case of car wheel clamping and tow-away are complex, and are made even more difficult because this area is yet to be tested in court in Australia. It's a community issue which needs to be resolved as the wheel clamping and tow-away operations increase.

Small-business proprietors who lose custom because members of the public continue to use private car parking space reserved for patrons no doubt see car clamping and tow-away as a positive remedy to a frustrating and costly problem. Unfortunately, self-remedies appear to have no limits, and when applied forcefully arouse rage and indignation. (The allegations of extra and seemingly arbitrary charges imposed on motorists who cause trouble for the tow-away firm are a good example.) Tempers flare as people fight for what they think are their rights, but with no recourse to law — unless the motorist is prepared to spend many times the amount he or she is being charged on taking the tow-away firm to court. Justice is not seen to be done.

It's a community issue which needs to be resolved urgently as private wheel clamping and tow-away operations increase. There are serious allegations of intimidation and breaches of the peace which need to be fully investigated for the purposes of a formal report. While there does seem to be a need for car tow-away services, perhaps this type of operation should not be left in the hands of private enterprise, which is governed by the need to show a profit, but left to councils and statutory authorities who have an interest in keeping order.

In the meantime:

■ If you feel you have been unfairly treated and wish to join the class action to bring this matter to court for clarification, contact solicitor John O'Callaghan, Riordans, Solicitors and consultants, 462 Burwood Road, Hawthorn 3122; (03) 819 5144. Participating motorists are asked to make whatever donation they can afford to the class action fund.

■ Alternatively, register the incident with your local motoring organisation — the RACV in Victoria is particularly interested in hearing from motorists.

■ Consider a small claims tribunal in certain circumstances. (Telephone your local community legal service for someone to discuss this option with.)

■ Read all signs carefully. If in doubt — park somewhere else! □

COMPACT CAMERAS

"Photography. Yes. Nudge nudge. Snap snap. Grin, grin, wink, wink, say no more!"

— Monty Python

IF YOU IGNORE the nudging and the winking, this is all most people want from their photography: a grin, a snap and a good photo. Say no more. The Box Brownie, Instamatic and disposable camera have all given us simplicity over the years but with limitations. The compact 35 mm camera gives us simplicity and versatility. Automatic focusing, zoom lenses, flashes that can light up a person in the foreground and also catch the city lights in the background. What more could a person want?

Of course, if you're serious about photography you'll still probably want to buy an SLR (single lens reflex) camera. These have detachable lenses so you can choose the lens to suit the photograph you want to take and a viewfinder that looks through the actual lens of the camera so you see exactly what the camera sees.

But if photography is more a means

to an end and you just want to take good-quality shots of your holidays or your children growing up, a compact camera is your best choice. Their advantage is their 'point and shoot' convenience. You don't really need to think about how far away your subject is (other than whether it's too close or not) or how much light there is — you'll still get a decent picture.

They do have some limitations. You'll probably find it hard to take satisfactory pictures of subjects you can't get close to, such as wildlife. Built-in flash units have a limited range. And because the viewfinder is separate from the lens, close-ups can be imprecise.

WHICH TYPE OF COMPACT CAMERA?

If you decide to buy a compact camera, there are five basic types to choose from. Because the capabilities of each type are quite different, we have grouped them

according to these types in our tables and recommendations. Starting from the simplest and cheapest, they are:

■ **Single focal length with fixed focus**, which take sharp photos of subjects at any distance greater than 1.5 m. They have a lens with a small aperture in order to focus over a range of distances, but this also means they aren't so good for taking pictures in poor light. Their relatively wide-angle lens isn't good for close-ups either.

■ **Single focal length with autofocus**: these are better than fixed-focus cameras in poor light and generally better at close-ups. They are no better at long-distance shots than their fixed-focus siblings, but on the whole they have more features and some are also particularly small and light.

■ **Dual focal length with autofocus** have two lenses, one with a fairly wide angle (like cameras with a single focal length)

CANON Prima Twin S

RICOH Shotmaster Ultra Zoom

OLYMPUS Superzoom 110



BEST BUYS

FOR TRAVEL

You don't always get a second chance to take photos when travelling, so you want a camera that's versatile enough to cope with whatever conditions are prevailing and one that's small and light enough to carry around without it becoming a chore.

Features you may find useful when travelling are a self-timer so you can get in the picture as well, an easy loading system and a flash that comes on automatically when the light is low. A camera with a variable focal length is also an advantage for taking long-distance shots.

BEST BUYS

■ The **SAMSUNG AF Slim 35** (\$199 to \$269) is the cheapest camera that meets most of

our criteria. It is small, light and has plenty of features but only has the single focal length, and we did detect a slight light leakage problem during testing, so don't leave it out in the sun.

■ The **CANON Prima Twin S** (\$235 to \$334) has two focal lengths, allowing you to take long-distance shots without going to the expense of a zoom camera.

■ The **FUJI DL-500 Mini Wide** (\$399 to \$480) has a slightly different dual focal length arrangement that can take wider-angle shots — useful for panoramas, but not so good for long-distance shots.

■ The **RICOH Shotmaster Ultra Zoom** (\$289 to \$310) is very small and light for a zoom camera and also reasonably priced.

■ The **OLYMPUS Superzoom 110** (\$415 to \$559) takes very good long-distance shots and is smaller and lighter than the other extended zoom cameras tested, although we also discovered a slight light leakage problem in this camera. The **CANON Prima Zoom 105** (\$465 to \$519) is in the same price range and performed better but is also heavier at 515 grams.

WORTH CONSIDERING

■ The **CANON Prima BF** (\$95 to \$120) wasn't considered versatile enough to be a Best Buy (because its single focal length and fixed focus mean it doesn't work as well in poor light), but otherwise performed well and is a good choice if you're on a low budget.

Photos supplied by UK Consumers' Association. Australian camera names may be different and are given in the captions.

and one telephoto lens, which makes distant subjects appear a bit closer.

■ **Autofocus zoom** have roughly the same wide-angle-to-telephoto range as dual focal length cameras, plus the ability to move to any setting in between. They're also laden with features, which can make them a bit heavy, bulky and complicated to use.

■ **Autofocus extended zoom** can zoom in quite dramatically on your subject (over 2.5 times magnification). They are noticeably bigger and heavier — one model we tested (the OLYMPUS IS 1000 AF) weighs a kilogram.

FEATURES

While extra features do increase the capabilities of these cameras, you may find the number of features on some overwhelming — especially when a salesperson is trying to convince you they're all important. *What to look for in a compact camera*, below, explains some of the more important features. We feel the following are worth paying extra for:

- An easy loading system and automatic setting of the film speed.
- Motorised film winding, which automatically moves to the next frame after you

take a photo and rewinds to the beginning when you've finished the whole film.

■ A built-in flash which comes on automatically when needed, and a system to prevent you taking flash pictures when the flash isn't ready.

■ A long-lasting lithium-type battery.

CONCLUSION

In *What to buy* we have listed the best compact cameras we tested in each group. You can choose from this list, or if you have a specific purpose in mind (taking photos of your holiday, family or favourite sports event), you might like to consult the best buys we have selected on page 31 and right.

If you have special photographic needs or would simply like to know more about these cameras, we have included specifications, features and performance information for each of the cameras tested on the following pages. You can use these tables and *What to look for in a compact camera* to pick a camera suited to your own personal needs.

If you're interested in SLR and video cameras as well, the *CHOICE Guide to Cameras and Camcorders* is available

through our Consumer Bookshelf. See page 19 for details.

WHAT TO BUY

In rank order within types	Price (\$)*
FIXED-FOCUS SINGLE FOCAL LENGTH	
CANON Prima BF	95/120
AUTOFOCUS SINGLE FOCAL LENGTH	
CONTAX T2	1695/1990
equal MINOLTA Riva Mini	258/319
YASHICA T3 Super	424
RICOH FF-9S	269/340
AUTOFOCUS DUAL FOCAL LENGTH	
CANON Prima Twin S	235/334
FUJI DL-500 Mini Wide	399/480
OLYMPUS AF-10 Twin	292/365
AUTOFOCUS ZOOM	
PENTAX Zoom 70-R	299/399
CANON Prima Zoom 76	295/449
OLYMPUS AZ-220 Widezoom	415/599
AUTOFOCUS EXTENDED ZOOM	
NIKON TW Zoom 105	699/756
CANON Epoca 135	649/699
CANON Epoca	565/699
equal CANON Prima Zoom 105	465/519
OLYMPUS IS1000 AF	799/900

* Prices shown indicate the range found in nationwide checks in November and December 1992.

WHAT TO LOOK FOR IN A COMPACT CAMERA

THE FOLLOWING six pages contain tables detailing the specifications, performance and features of the 76 cameras we tested. This sounds daunting, but you may only need to look at a couple of columns to find the best camera for your needs. This section is intended to help you find those columns.

First, the cameras have been grouped according to type of focus and focal length: ■ **Fixed-focus** cameras are designed to take clear photos of subjects more than 1.5 m away. **Autofocus** cameras generally allow you to get closer to your subject but you still don't have to worry about setting the focus correctly. There were no manual-focus cameras in our test.

See the *Performance* table on pages 36 to 37 to find how **accurate** the camera was at **focusing** at various distances. ■ **The focal length** (*Specifications* table column 4, pages 34 to 35) tells you how much information you will fit in your picture. A short focal length gives you a wide-angle shot whereas a longer focal length makes distant objects appear closer (telephoto).

All the **single focal length** cameras in our test had focal lengths of around 35 mm. This takes a reasonably wide-angle shot, so the photo often looks as if it was taken further away than it really was. A **dual focal length** camera has two lenses, one a stand-

ard 35 mm lens (or a wider-angle 28 mm lens) and the other a slightly longer lens (up to 70 mm). A 70 mm lens will give you slightly more detail than you can see with the naked eye, but it won't make distant eagles appear close enough to touch.

A **zoom** lens can be moved in and out to vary the focal length so you can frame your picture exactly. However, an ordinary zoom on a compact camera gives you a focal length range similar to the better dual focal length cameras and may not be much more useful. An **extended zoom** camera gives you a much wider range of focal lengths, some up to 135 mm.

EXPOSURE

The real trick to photography is making sure you get the right amount of light on your film so it isn't under or overexposed. Factors affecting this are the size of the aperture, the length of time the shutter stays open, and the speed with which the film reacts to light. If you're not a camera buff, it helps if the camera makes as many of these decisions as possible.

■ We tested each camera's **exposure accuracy** (see *Performance* table), taking into account information given in the instructions and any indications given on the camera itself. Generally they all performed well when used with a flash but their accuracy

was much more variable in daylight. This is more important if you use slide film rather than print film, in which case you should aim for a camera with a score of at least 4 for both daylight and flash.

■ **The aperture** (*Specifications* column 3) is the opening which lets the light into the camera. A **smaller f-number** here means a wider maximum aperture. This allows more light in and makes the camera more versatile in poor light situations.

■ **A shutter speed** (*Specifications* column 5) slower than about 1/60 second is also useful for taking pictures in dull conditions without a flash (as is the ability to use a tripod). Some cameras are capable of keeping the shutter open indefinitely (*Features* table column 7, pages 38 to 39). If you want to take action shots, you will need a camera with a fairly fast shutter speed (1/250 of a second or faster).

■ You can buy **film** that reacts at different **speeds** (*Specifications* column 6) to the light coming in. A faster film (high ISO number) reacts very quickly so is good for fast action shots, but the resulting pictures can be a bit grainy. A slower film is good for high-definition photographs. A camera with a wider range gives greater versatility, but ISO 100 or 400 films are adequate for most photos. If you do want to use a range of films, it helps to have a camera that automatically recognises the type of film (*Features* column 1).



CANON Prima BF



RICOH Mirai Zoom 3



CANON Epoca 135

BEST BUYS

FOR FAMILY SHOTS

If most of your photos are of family events or outings, you probably don't need a camera with lots of features, although a self-timer is useful if you want to get into a group shot. We've looked for models that are easy to use and produce good-quality pictures while still being reasonably priced.

BEST BUYS

■ The **CANON Prima BF** (\$95 to \$120) was clearly the best of the fixed-focus cameras and won't blow your budget.

■ If you want an autofocus camera, the **KONICA MT-100** (\$140 to \$199) and **YASHICA AF-Mini** (\$165 to \$199) were the cheapest models that met our minimum convenience and picture quality standards.

■ You don't need to worry about setting the aperture or shutter speed on any of these cameras. **Exposure control** (Specifications column 7) is mostly programmed (P), where aperture and shutter speed are varied according to the level of light.

Other systems are:

F: the shutter speed is fixed and aperture only is changed if you use film with a different speed, or when the flash is on.

AA: on some of the cameras with programmed exposure control, you can manually set the aperture if you want and the shutter speed will be set automatically.

As: a couple of cameras have fixed apertures (except for flash) and automatically vary the shutter speed.

At: these cameras switch automatically between two exposure settings.

N: the **FUJI FZ-5** and **DL-8** allow no control — both aperture and shutter speed are fixed.

BATTERY FEATURES

All these cameras have battery-operated flashes, many of which come on automatically when the light is low (Features column 8 **Sensor auto flash**). When you're trying to take a photo of something in front of a bright background, you can use the flash on some cameras so the subject and background are equally well exposed (Features column 9 **Backlighting**).

Most of the cameras in this test were **motorised** (Features column 4), which saves you having to wind the film on after every

Sports action invariably occurs a long way from where you're sitting or standing, so you really need a camera with a fairly long focal length (like a zoom). That's why sports photographers have such large lenses on their cameras. A 50 mm lens will give you a picture with roughly the same amount of detail you can see with the naked eye.

If you follow a fast-moving sport, you probably also want a camera with a very fast shutter speed that you can set manually and the capability of using fast film. A reasonably versatile camera is also important if your sport goes ahead rain, hail or shine. Some useful features include a tripod socket and the ability to take a series of shots in quick succession.

shot and in most cases will also automatically rewind at the end of the film; in some cameras it also allows you to take a number of photos in quick succession.

However, the motor and frequent use of the flash can take their toll on the **battery** fairly quickly. A lithium battery (like the ones used in digital watches) lasts longer and can do more things at once than standard alkaline batteries, but is considerably more expensive. A few cameras can use either sort of battery (Specifications column 1).

EASE OF USE

Virtually all the cameras in this test have an **easy loading system** (Features column 1) whereby you place the film in the camera, pull the end across to a mark and close the back of the camera without worrying if you've threaded it on correctly — the camera does it for you.

Most give you some sort of **indication** (Features column 2) that the film is correctly loaded (C) and the flash is ready to use (F). Some give you a warning if you are too close to the subject to focus correctly (P).

It is helpful to have some sort of outline or **guide** on the viewfinder to show you exactly what will make it onto the final picture (Features column 3).

Many cameras will stop you making a mistake by **locking the shutter** (Features column 5) if the lens cover is on (L) or the flash isn't ready and you want to take a flash photograph (F).

FOR SPORTS FANS

BEST BUYS

■ The cheapest camera with all the features mentioned above was the **OLYMPUS IS 1000 AF** (\$799 to \$900). It has a particularly fast shutter speed (up to 1/500 of a second) and 135 mm zoom.

If you can live without taking quite such fast action shots, the following are good sports cameras. They cost progressively more as their maximum focal length increases.

■ The **RICOH Mirai Zoom 3** (\$399 to \$500) can zoom up to 105 mm.

■ The **CANON Epoca 135** (\$649 to \$699) has a maximum zoom of 135 mm.

Our **convenience** rating (Performance column 5) takes into account most of these factors plus simplicity of controls and instructions.

PERFORMANCE

Our overall performance score (Performance column 6) covers four areas: picture quality (40%), versatility (25%), convenience (25%) and construction (10%). Convenience is covered above in *Ease of use*. Scores for different aspects of performance have been converted to a scale of 1 to 5, with 5 being the highest.

The construction score included an impact test plus any significant faults found during testing. The only problem worth mentioning was a slight light leak in a number of cameras (Performance column 1). This can result in streaking or fogging of the pictures you've taken. All cameras were left in bright light for 12 hours to see how 'light-tight' they were.

Our **picture quality** rating (Performance column 3) covers focus and exposure accuracy, optical quality, viewfinder accuracy and light uniformity, among other tests.

A **versatile** camera (Performance column 4) can take good pictures in a range of conditions such as poor light or uneven light and is also capable of close-up and panoramic shots. **Close-up ability** has been included separately in the performance table. If you want to take good head-and-shoulders portraits, you need a camera with a score of 4 or 5 in this column.

COMPACT CAMERAS: SPECIFICATIONS

		1	2	3	4	5	6	7		
	Brand/model (in rank order within groups)	Price (\$)	Battery type	Weight (g)	Size	Maximum aperture (f-number)	Focal length (mm)	Shutter speed range (sec)	Film speed range (ISO)	Exposure control
FIXED-FOCUS SINGLE FOCAL LENGTH										
equal	CANON Prima BF	95/120	Alkaline	290	XXX	6.3	35	1/60-1/100	100-400	At
	KONICA Tops	99/149	Lithium	250	XXX	4.6	34	1/125	100, 400	F
	RICOH LX-22	107/129	Alkaline	295	XXX	6.1	35	1/200	100-1000	F
	FUJI DL-25	89/110	Alkaline	290	XXXX	5.3	35	1/125	100, 400	F
	CANON Prima Junior Hi	94/125	Alkaline	245	XXX	4.3	35	1/100	100, 400	F
	FUJI DL-8	50/60	Alkaline	235	XXX	9.8	35	1/125	100	N
	OLYMPUS Trip Panorama	159/190	Alkaline	270	XXX	6.7	33	1/125	100-400	F
	YASHICA J-Mini	129/139	Alkaline	260	XX	3.8	32	1/60-1/125	100, 400	At
equal	HANIMEX FC3S	59/80	Alkaline	270	XXX	4.8	35	1/125	100, 400	F
	MINOLTA Riva 35	85/112	Alkaline	235	XXX	5.2	35	1/125	100, 400	F
	OLYMPUS Trip Junior	89/149	Alkaline	270	XXX	5.1	33	1/125	100-400	F
	FUJI FZ-5	50/80	Alkaline	225	XXX	8.6	35	1/125	100, 400	N
	KODAK 735	80/139	Alkaline	245	XXX	5.1	35	1/125	100-400	F
	KODAK 235	40/70	Alkaline	220	XXX	7.9	36	1/100	100-400	F
AUTOFOCUS SINGLE FOCAL LENGTH										
equal	CONTAX T2	1695/1990	Lithium	340	X	2.8	38	1-1/500	25-5000	P, AA
	MINOLTA Riva Mini	258/319	Lithium	205	X	3.2	34	1/4-1/500	50-3200	P
	YASHICA T3 Super	424	Lithium	340	XXX	3.4	35	1-1/500	64-1600	P
	RICOH FF-9S	269/340	Lithium	280	XX	3.5	35	1/4-1/500	100-1600	P
equal	LEICA Mini	799/949	Lithium	220	XX	3.5	35	5-1/250	50-1000	P
	OLYMPUS Mju-1	299/329	Lithium	210	X	3.5	35	1/15-1/500	50-3200	P
	SAMSUNG AF Slim 35	199/269	Lithium	225	X	3.5	35	1/2-1/500	50-3200	P
	CANON Prima S	199/225	Lithium	265	XX	3.3	38	1/4-1/100	25-3200	P
equal	NIKON W35	219/320	Alkaline	270	XXX	3.3	35	1/8-1/250	100-1000	P
	PANASONIC C-62SAF Super Mini	299/359	Lithium	210	X	3.2	34	1/4-1/500	50-3200	P
	KONICA MT-100	140/199	Lithium	265	XX	4.1	34	2-1/500	100-400	As
equal	OLYMPUS AF10 Super	189/249	Both	245	XX	3.2	35	1/15-1/200	50-800	P
	YASHICA AF-mini	165/199	Lithium	265	XX	4.1	34	2-1/500	100-400	As
	YASHICA AW-mini	232	Both	260	XXX	4.3	32	1/60-1/500	100-1000	P
	PENTAX PC-606W	195/259	Lithium	240	XXX	5.9	35	1/30-1/100	100, 400	P
	PENTAX PC-505	169/229	Alkaline	290	XXX	3.5	35	1/30-1/500	100-400	P
	VIVITAR PS-90	149	Both	330	XXX	4.6	35	1/200	100, 400	F
equal	FUJI DL-80	122/184	Alkaline	300	XXXX	5.5	35	1/125	100, 400	F
	KODAK 835AF	80/129	Alkaline	320	XXX	6.3	34	1/100-1/180	100-1000	At
	MINOLTA Riva AF 35	180/235	Alkaline	295	XXX	4.7	35	1/30-1/180	100, 400	P
	NIKON RF10	147/169	Alkaline	265	XXX	6.5	34	1/150	100, 400	F
	SAMSUNG AF 200	129	Alkaline	340	XXX	4.8	35	1/2-1/200	100, 400	P
	PENTAX PC-313	99/120	Alkaline	265	XXX	4.8	35	1/125	100-400	F
	PANASONIC C-42SAF	149/169	Alkaline	265	XXX	4.9	35	1/125	100, 400	F

SPECIFICATIONS

What to look for in a compact camera on page 32 explains these specifications in more detail. The following is a quick guide to using the table; it's ordered according to the numbers above each column. Prices shown indicate the range found in nationwide checks in November and December 1992.

1. A lithium **battery** charges the flash faster and lasts longer than an alkaline one, but is also more expensive.
2. The more **XXXs** the larger the camera.
3. A lower f-number for **maximum aperture** means the camera is probably more versatile in low light.

COMPACT CAMERAS: SPECIFICATIONS

Brand/model (in rank order within groups)	Price (\$)	Battery type	Weight (g)	Size	Maximum aperture (f-number)	Focal length (mm)	Shutter speed range (sec)	Film speed range (ISO)	Exposure control
AUTOFOCUS DUAL FOCAL LENGTH									
CANON Prima Twin S	235/334	Lithium	280	XXX	3.5/5.3	38/70	1/8-1/250	25-3200	P
FUJII DL-500 Mini Wide	399/480	Lithium	250	XX	3.5/5.9	28/45	1/2-1/250	50-1600	P
OLYMPUS AF-10 Twin	292/365	Lithium	300	XXX	3.5/6.5	35/70	1/15-1/250	50-1600	P
MINOLTA Weathermatic 35 DL	379/483	Both	465	XXXXX	3.6/6.0	35/50	1/200-1/125	100-400	P
MINOLTA Riva Twin 28	239/359	Lithium	330	XXXX	3.9/4.9	28/40	1/4-1/125	100, 400	P
FUJII DL-180 Tele	135/245	Alkaline	335	XXXX	6.2/9.2	35/55	1/100	100, 400	F
AUTOFOCUS ZOOM									
PENTAX Zoom 70-R	299/399	Lithium	450	XXXX	3.5-6.6	35-70	1/4-1/250	50-1600	P
CANON Prima Zoom 76	295/449	Lithium	440	XXXX	3.2-6.8	38-76	2-1/350	25-3200	P
OLYMPUS AZ-220 Widezoom	415/599	Lithium	400	XXXX	3.2-6.5	28-56	2-1/125	50-3200	P
OLYMPUS AZ-230 Superzoom	485/499	Lithium	435	XXXX	4.3-6.0	38-90	2-1/160	50-3200	P
PENTAX Zoom 90-WR Weatherzoom	449/500	Lithium	500	XXXXX	3.4-8.0	38-90	1/4-1/250	25-3200	P
SAMSUNG Zoom AF 777I	339/379	Lithium	440	XXXX	3.5-6.1	35-70	1/4-1/250	25-3200	P
KONICA Big Mini 3112	297/399	Lithium	330	XXX	4.4-6.9	35-70	4-1/350	25-3200	P
OLYMPUS AZ-210 Superzoom	369/439	Lithium	425	XXXXX	4.5-5.7	38-76	2-1/200	50-3200	P
NIKON TW Zoom 35-70	419/499	Lithium	440	XXXX	4.0-7.6	35-70	1-1/250	64-1600	P
PANASONIC C-2100 ZM	369/459	Lithium	430	XXXX	4.9-7.7	38-80	1/3-1/150	50-1600	P
PENTAX Zoom 60-X	259/319	Lithium	350	XXX	4.9-6.4	38-60	1/4-1/250	50-1600	P
RICOH Shotmaster Ultra Zoom	289/310	Lithium	260	X	4.4-6.5	38-60	1/4-1/250	64-3200	P
RICOH Shotmaster Zoom Super	359/399	Lithium	400	XXXX	4.6-7.5	38-80	1-1/250	64-3200	P
MINOLTA Riva Zoom 70c	339/416	Lithium	325	XXX	4.1-6.5	35-70	1/4-1/350	100, 400	P
YASHICA Zoomtec 70	325/569	Lithium	395	XXXX	3.4-6.7	35-70	1/2-1/250	50-1600	P
SIGMA Zoom Super 100	299/399	Lithium	530	XXXXX	4.3-7.7	50-100	1-1/200	25-3200	P
CHINON Pocket Zoom 60	269/349	Lithium	315	XX	4.1-6.4	38-60	1/4-1/250	50-1600	P
MINOLTA Riva Zoom 90c	399/528	Lithium	380	XXXX	3.1-6.9	38-90	1/4-1/350	25-3200	P
YASHICA Zoomtec 90	399/460	Both	470	XXXX	3.7-8.3	38-90	2-1/500	50-1600	P
AUTOFOCUS EXTENDED ZOOM									
NIKON TW Zoom 105	699/756	Lithium	560	XXXXX	4.0-11.3	37-105	1-1/125	64-3200	P
CANON Epoca 135	649/699	Lithium	700	XXXXXX	3.2-8.0	38-135	2-1/350	25-3200	P
CANON Epoca	565/699	Lithium	665	XXXXX	2.8-6.6	35-105	2-1/250	25-3200	P
CANON Prima Zoom 105	465/519	Lithium	515	XXXX	3.6-8.0	35-105	2-1/400	25-3200	P
OLYMPUS IS1000 AF	799/900	Lithium	995	XXXXXXXX	4.3-5.6	35-135	17-1/1500	25-3200	P, AA
RICOH Mirai Zoom 3	399/500	Lithium	565	XXXXX	3.0-7.5	35-105	2-1/400	64-3200	P
CHINON GS-9/Genesis III	400/599	Lithium	800	XXXXXXXX	3.7-6.5	38-110	1-1/1000	25-1600	P
PENTAX Zoom 105-R	480/585	Lithium	535	XXXXX	4.0-6.8	38-105	1/4-1/250	25-3200	P
OLYMPUS Superzoom 110	415/559	Lithium	360	XXXX	3.6-7.2	38-110	2-1/250	50-3200	P
MINOLTA Riva Zoom 105i	499/702	Lithium	695	XXXXXX	4.0-7.0	35-105	2-1/400	25-3200	P
PANASONIC C-3000 ZM	489	Lithium	460	XXXXX	3.8-8.6	28-80	1/4-1/250	50-3200	P
SAMSUNG AF Zoom 1050	469/499	Lithium	445	XXXXX	4.3-9.0	38-105	1/4-1/250	25-3200	P
KONICA Aiborg	499/599	Lithium	595	XXXXXX	3.4-8.0	35-105	6-1/250	25-3200	P

- Short focal lengths are good for wide angles, longer ones for close-ups.
- A shutter that can stay open for longer than 1/60 of a second is useful for taking pictures in low light, while a faster speed is good for action shots.
- Faster film speeds are good for action

shots, but ISO 100 or 400 films are adequate for most photos.

7. Programmed (P) exposure control sets the aperture and shutter speed automatically; some programmed cameras also allow you to set the aperture manually (AA). Some cameras switch automatically be-

tween two exposure settings (At). Some have a fixed (F) shutter speed and an aperture that only changes with film speed or if the flash is set, while others have a fixed aperture and a variable shutter speed (As). Two cameras have no control (N) — both aperture and shutter speed are fixed.

COMPACT CAMERAS: PERFORMANCE

	1	2				3	4	5	6	
Brand/model (in rank order within groups)	Light leakage problem	Optical quality	Focus accuracy	Daylight exposure accuracy	Flash exposure accuracy	Close-up ability	Picture quality	Versatility	Convenience	Overall score (%)
FIXED-FOCUS SINGLE FOCAL LENGTH										
CANON Prima BF		5	4	3	5	1	4	2	5	64
equal KONICA Tops		4	3	1	5	1	3	1	4	54
RICOH LX-22		4	4	1	5	3	3	2	4	54
FUJI DL-25		5	4	3	4	1	4	1	4	52
CANON Prima Junior Hi		4	4	2	4	1	3	1	4	51
FUJI DL-8		5	4	3	5	2	4	1	2	50
OLYMPUS Trip Panorama		4	3	2	5	2	3	2	3	49
YASHICA J-Mini		4	3	2	5	1	3	1	4	48
HANIMEX FC3S		5	3	1	3	1	3	1	3	47
equal MINOLTA Riva 35		4	3	1	5	1	3	1	3	47
OLYMPUS Trip Junior		4	4	2	5	3	3	2	3	47
FUJI FZ-5		4	5	2	4	2	3	2	2	46
KODAK 735		4	2	3	4	1	3	1	3	45
KODAK 235	✓	4	4	1	5	2	3	1	2	39
AUTOFOCUS SINGLE FOCAL LENGTH										
CONTAX T2		4	5	5	5	4	4	5	4	74
equal MINOLTA Riva Mini		4	4	4	5	4	4	3	5	72
YASHICA T3 Super	✓	4	5	5	5	4	4	4	5	72
RICOH FF-9S		4	4	4	5	3	4	4	5	71
equal LEICA Mini	✓	4	5	4	5	4	4	3	5	69
OLYMPUS Mju-1		4	4	4	5	5	4	4	5	69
SAMSUNG AF Slim 35	✓	4	4	5	4	5	4	4	5	69
CANON Prima 5		4	5	3	5	4	4	3	4	67
equal NIKON W35		4	4	4	5	4	4	3	4	66
PANASONIC C-625AF Super Mini	✓	4	4	4	5	4	4	3	5	66
KONICA MT-100		5	4	4	5	2	4	3	4	63
equal OLYMPUS AF10 Super		4	4	3	4	4	4	3	4	63
YASHICA AF-Mini		5	4	4	5	2	4	3	4	63
YASHICA AW-Mini		4	4	4	4	3	4	3	4	62
PENTAX PC-606W		4	4	4	5	3	4	3	4	60
PENTAX PC-505		4	4	4	4	3	4	3	4	59
VIVITAR PS-90		4	4	1	5	3	3	2	4	55
FUJI DL-80		3	5	2	4	2	4	1	4	52
equal KODAK 835AF		5	4	2	5	2	4	1	4	52
MINOLTA Riva AF 35		4	3	3	4	3	3	2	4	52
NIKON RF10		4	4	1	5	2	3	2	4	52
SAMSUNG AF 200	✓	4	4	3	4	1	3	2	3	50
PENTAX PC-313		4	4	3	5	2	3	2	3	49
PANASONIC C-425AF	✓	3	4	1	4	2	3	1	4	45

PERFORMANCE

What to look for in a compact camera on page 32 explains our performance assessments in more detail. The following is a quick guide to using the table; it's ordered according to the numbers above the columns. Performance aspects were scored

from 1 to 5, with 5 being the highest; the overall score is given as a percentage of an ideal score.

1. A ✓ means the camera had a slight light leakage problem, which may result in streaking or fogging of your photos.

COMPACT CAMERAS: PERFORMANCE

Brand/model (in rank order within groups)	1 Light leakage problem	2 Optical quality	3 Focus accuracy	4 Daylight exposure accuracy	5 Flash exposure accuracy	6 Close-up ability	7 Picture quality	8 Versatility	9 Convenience	Overall score (%)
AUTOFOCUS DUAL FOCAL LENGTH										
CANON Prima Twin S		4	4	3	5	5	4	4	4	68
FUJII DL-500 Mini Wide		3	4	3	4	5	3	4	5	65
OLYMPUS AF-10 Twin		3	4	4	4	4	3	4	5	64
MINOLTA Weathermatic 35 DL		4	4	4	4	4	4	3	4	60
MINOLTA Riva Twin 28	✓	4	4	4	5	4	4	3	4	57
FUJII DL-180 Tele		4	3	2	4	3	3	2	4	49
AUTOFOCUS ZOOM										
PENTAX Zoom 70-R		4	5	5	5	5	4	4	5	74
CANON Prima Zoom 76		4	4	4	5	5	4	5	5	73
OLYMPUS AZ-220 Widezoom		3	5	4	5	4	4	4	5	72
OLYMPUS AZ-230 Superzoom	✓	3	5	4	5	5	4	5	5	71
PENTAX Zoom 90-WR Weatherzoom		3	4	5	5	5	4	5	4	71
SAMSUNG AF Zoom 777i		4	4	4	5	5	4	4	5	70
KONICA Big Mini 311Z		4	5	3	5	5	4	4	4	69
OLYMPUS AZ-210 Superzoom	✓	4	4	4	5	5	4	4	5	69
NIKON TW Zoom 35-70		4	4	4	5	5	4	4	4	68
PANASONIC C-2100 ZM		3	4	4	5	5	4	4	5	68
PENTAX Zoom 60-X		4	5	4	5	5	4	3	5	68
RICOH Shotmaster Ultra Zoom		4	5	4	4	5	4	4	4	68
RICOH Shotmaster Zoom Super		3	3	4	5	5	4	4	4	68
MINOLTA Riva Zoom 70c	✓	4	4	5	4	5	4	4	5	64
YASHICA Zoomtec 70		4	4	3	5	5	4	4	4	64
SIGMA Zoom Super 100	✓	3	4	3	4	5	3	4	4	63
CHINON Pocket Zoom 60		3	3	3	5	5	3	4	5	61
MINOLTA Riva Zoom 90c	✓	3	2	4	5	5	3	4	5	59
YASHICA Zoomtec 90		3	4	3	5	5	3	4	4	59
AUTOFOCUS EXTENDED ZOOM										
NIKON TW Zoom 105		4	5	4	4	5	4	5	5	77
CANON Epoca 135		3	5	5	5	5	4	5	5	76
CANON Epoca		4	4	5	5	5	4	5	5	74
CANON Prima Zoom 105		4	5	4	5	5	4	5	4	74
OLYMPUS IS1000 AF	✓	4	5	4	5	5	4	5	4	74
RICOH Miral Zoom 3		3	5	4	5	5	4	5	4	72
CHINON GS-9/Genesis III		4	4	5	5	5	4	5	4	71
PENTAX Zoom 105-R		4	4	4	5	5	4	5	5	70
OLYMPUS Superzoom 110	✓	3	3	4	4	5	4	5	5	69
MINOLTA Riva Zoom 105i	✓	3	4	4	5	5	4	4	5	66
PANASONIC C-3000 ZM		3	5	3	5	5	4	4	4	66
SAMSUNG AF Zoom 1050		3	2	3	4	5	3	5	5	66
KONICA Aiborg	✓ (A)	3	4	3	5	5	3	5	4	65

(A) Since testing, the manufacturer has fitted a new part it claims will fix the light leakage problem.

2. Optical quality is a measure of how sharp the image through the lens is.
3. A number of tests (including optical quality, exposure accuracy and focus accuracy) were performed to determine **picture quality**.

4. Versatility is a measure of the camera's ability to cope with different circumstances, such as low light, close-ups, distance shots.
5. Convenience covers any features that make a camera easier to use, plus simplicity of controls and instructions.

6. The overall score is a combination of picture quality (40%), versatility (25%), convenience (25%) and any problems (including light leakage) observed during testing (construction — 10%).

COMPACT CAMERAS: FEATURES

	1	2	3	4	5	6	7	8	9	10	11	
Brand/model (in rank order within groups)	Easy loading	Indications	Picture guide	Motorised	Shutter lock	Self-timer	Long exposure	Sensor auto flash	Backlighting	Tripod socket	Strap/pouch	Splashproof
FIXED-FOCUS SINGLE FOCAL LENGTH												
equal	CANON Prima BF	✓	CF	✓	✓✓	LF	✓	✓		✓	SP	
	KONICA Tops	✓	CF	✓	✓✓	L	✓	✓		✓	SP	
	RICOH LX-22	✓A	CF		✓✓	L	✓	✓		✓	SP	
	FUJI DL-25	✓	CF		✓	L		✓			S	
equal	CANON Prima Junior Hi	✓	CF		✓✓	LF	✓	✓		✓	SP	
	FUJI DL-8	✓A	CF			L					SP	
	OLYMPUS Trip Panorama	✓A	CF	✓	✓	L					SP	
	YASHICA J-Mini	✓	CF		✓✓	L	✓	✓		✓	SP	
	HANIMEX FC3s	B	CF		✓	L		✓			SP	
	MINOLTA Riva 35	✓	CF		✓✓	L					SP	
	OLYMPUS Trip Junior	✓A	CF		✓	L					S	
	FUJI FZ-5	B	CF			L					SP	
	KODAK 735	✓	CF		✓✓						S	
	KODAK 235	✓A	F			L					S	
AUTOFOCUS SINGLE FOCAL LENGTH												
equal	CONTAX T2	✓	CFP	✓	✓✓	LF	✓	✓	✓	✓	SP	
	MINOLTA Riva Mini	✓	CFP	✓	✓✓	F	✓		✓✓	✓	SP	
	YASHICA T3 Super	✓	CFP	✓	✓✓✓	LF	✓		✓✓	✓	SP	
	RICOH FF-9S	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	S	
equal	LEICA Mini	✓	CFP	✓	✓✓	F	✓	✓	✓✓	✓	S	
	OLYMPUS Mju-1	✓	CFP	✓	✓✓	LF	✓		✓✓	✓	S	
	SAMSUNG AF Slim 35	✓	CFP	✓	✓✓✓	LF	✓	✓F	✓✓	✓	S	
	CANON Prima 5	✓	CP	✓	✓✓	LF	✓		✓✓		✓	SP
equal	NIKON W35	✓	CF	✓	✓✓	LF	✓	F	✓✓		✓	SP
	PANASONIC C-625AF Super Mini	✓	CFP	✓	✓✓	LF	✓		✓✓	✓	✓	SP
	KONICA MT-100	✓	CF	✓	✓✓	LF	✓		✓✓	✓	✓	SP
	OLYMPUS AF10 Super	✓	C	✓	✓✓	L	✓		✓✓	✓	✓	S
equal	YASHICA AF-Mini	✓	CF	✓	✓✓	LF	✓		✓✓	✓	✓	SP
	YASHICA AW-Mini	✓	CF	✓	✓✓	L	✓	✓	✓	✓	SP	✓
	PENTAX PC-606W	✓	CF	✓	✓✓	F	✓	✓		✓	SP	✓
	PENTAX PC-505	✓	CF	✓	✓	L	✓		✓	✓	SP	
	VIVITAR PS-90	✓	CFP	✓	✓	LF			✓		SP	
	FUJI DL-80	✓	CF	✓	✓	L		✓			S	
	KODAK 835AF	✓	CF	✓	✓✓	L		✓			S	
	MINOLTA Riva AF35	✓	CF	✓	✓✓	LF	✓	✓		✓	SP	
	NIKON RF10	✓	CF	✓	✓	L		✓			SP	
	SAMSUNG AF 200	✓	F	✓	✓	L	✓	✓		✓	S	
PENTAX PC313	✓A	CF		✓	L					SP		
PANASONIC C-425AF	✓	CF	✓	✓	L			✓	✓	SP		

FEATURES

What to look for in a compact camera on page 32 explains these features in more detail. The following is a quick guide to using the table; it's ordered according to the numbers above each column.

1. A: Film can be loaded easily but the camera does not automatically set the film type. **B** sets the film type but doesn't have an easy loading system. Cameras with a ✓ alone do both.

2. A light or other warning tells you if the film is incorrectly loaded (**C**), the flash is ready (**F**) or you're too close to the subject to focus (**P**).

COMPACT CAMERAS: FEATURES

	1	2	3	4	5	6	7	8	9	10	11	
Brand/model (in rank order within groups)	Easy loading	Indications	Picture guide	Motorised	Shutter lock	Self-timer	Long exposure	Sensor auto flash	Backlighting	Tripod socket	Strap/pouch	Splashproof
AUTOFOCUS DUAL FOCAL LENGTH												
CANON Prima Twin S	✓	CP	✓	✓✓✓	LF	✓		✓	✓	✓	SP	
FUJII DL-500 Mini Wide	✓	CFP	✓	✓✓	LF	✓		✓✓	✓	✓	SP	
OLYMPUS AF-10 Twin	✓	CFP	✓	✓✓✓	LF	✓		✓✓	✓	✓	S	
MINOLTA Weathermatic 35 DL	✓	CF	✓	✓✓	F			✓			SP	✓✓
MINOLTA Riva Twin 28	✓	CF	✓	✓✓	LF	✓		✓✓		✓	SP	
FUJII DL-180 Tele	✓	CF	✓	✓	L			✓			S	
AUTOFOCUS ZOOM												
PENTAX Zoom 70-R	✓	CFP	✓	✓✓✓	LF	✓	✓F	✓✓	✓	✓	SP	
CANON Prima Zoom 76	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	SP	
OLYMPUS AZ-220 Widezoom	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	SP	
OLYMPUS AZ-230 Superzoom	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	SP	
PENTAX Weather Zoom 90-WR	✓	CFP	✓	✓✓✓	F	✓	✓F	✓✓	✓	✓	SP	✓
SAMSUNG AF Zoom 777i	✓	CFP	✓	✓✓✓	LF	✓	✓F	✓✓	✓	✓	SP	
KONICA Big Mini 311Z	✓	CFP	✓	✓✓✓	F	✓	F	✓✓	✓	✓	SP	
OLYMPUS AZ-210 Superzoom	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	S	
NIKON TW Zoom 35-70	✓	CFP	✓	✓✓	LF	✓	F	✓✓	✓	✓	S	
PANASONIC C-2100ZM	✓	CFP	✓	✓✓✓	LF	✓	✓F	✓✓	✓	✓	SP	
PENTAX Zoom 60-X	✓	CFP	✓	✓✓	LF	✓	✓	✓✓		✓	SP	
RICOH Shotmaster Ultra Zoom	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	SP	
RICOH Shotmaster Zoom Super	✓	CFP	✓	✓✓	LF	✓	F	✓✓	✓	✓	SP	
MINOLTA Riva Zoom 70c	✓	CFP	✓	✓✓	LF	✓	F	✓✓		✓	SP	
YASHICA Zoomtec 70	✓	CFP	✓	✓✓✓	LF	✓	✓	3 3		✓	SP	
SIGMA Zoom Super 100	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	SP	
CHINON Pocket Zoom 60	✓	CFP	✓	✓✓✓	F	✓	F	✓✓	✓	✓	S	
MINOLTA Riva Zoom 90c	✓	CF	✓	✓✓	LF	✓		✓✓		✓	SP	
YASHICA Zoomtec 90	✓	CFP	✓	✓✓✓	LF	✓		✓✓		✓	SP	
AUTOFOCUS EXTENDED ZOOM												
NIKON TW Zoom 105	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	SP	
CANON Epoca 135	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	SP	
CANON Epoca	✓	CFP	✓	✓✓✓	LF	✓	F	✓✓	✓	✓	SP	
CANON Prima Zoom 105	✓	CFP	✓	✓✓✓	F	✓	F	✓✓	✓	✓	SP	
OLYMPUS IS1000 AF	✓	CFP	✓	✓✓✓	LF	✓	✓F	✓✓	✓	✓	S	
RICOH Miral Zoom 3	✓	CFP	✓	✓✓✓	F	✓		✓✓	✓	✓	SP	
CHINON GS-9/Genesis III	✓	CFP	✓	✓✓✓	F	✓	✓F	✓✓	✓	✓	S	
PENTAX Zoom 105-R	✓	CFP	✓	✓✓✓	LF	✓	✓F	✓✓	✓	✓	SP	
OLYMPUS Superzoom 110	✓	CFP	✓	✓✓	LF	✓	F	✓✓	✓	✓	SP	✓
MINOLTA Riva Zoom 105i	✓	CFP	✓	✓✓	LF	✓		✓✓	✓	✓	SP	
PANASONIC C-3000 ZM	✓	CFP	✓	✓✓✓	F	✓	✓F	✓✓		✓	SP	
SAMSUNG AF Zoom 1050	✓	CFP	✓	✓✓✓	LF	✓	✓F	✓✓	✓	✓	S	
KONICA Aiborg	✓	CFP	✓	✓✓✓	LF	✓	✓F	✓✓	✓	✓	SP	

3. Has a guide in the viewfinder to what will actually fit in the picture.

4. The film winds on automatically each time a photo is taken (✓), also rewinds automatically at the end of the film (✓✓) and can take a number of exposures in quick succession (✓✓✓).

5. Photo can't be taken if the lens cover is still on (L) or the flash isn't ready (F).

6. A self-timer allows you to delay taking the picture for a few seconds in order to get yourself into the shot.

7. Shutter can be opened indefinitely (✓). F: can use flash during long exposures.

8. Flash comes on automatically in poor

light (✓) but can be switched off if you wish (✓✓).

9. Can adjust exposure when subject is lit from behind.

10. Comes with a wrist or neck strap (S) and a case or pouch (P).

11. A splashproof camera (✓) can't be submerged; a waterproof one (✓✓) can.



GREEN PAGE

ENVIRONMENTAL CLAIMS CAN STILL CONFUSE

THE MANUFACTURER of the IN-SINK-ERATOR, a sink waste disposal unit which was the focus of last November's *Green Spotlight*, has continued to market the product with an environmental claim — now with the endorsement of the government-sponsored Environmental Choice Australia program. We've had several letters from subscribers, asking us how this could be.

In its current form, Environmental Choice Australia's primary role is to verify that any environmental claim made for a product whose manufacturer wants to use the program's logo is true. When we spoke to Kevin Doyle, director of Environmental Choice Australia, he told us the original application by the maker of IN-SINK-ERATOR included a number of claims.

A team of scientific officers examined these claims and found only one — "Food waste disposers reduce the volume of material going to landfill" — they considered to be true. This is the only marketing claim able to be made for the IN-SINK-ERATOR in ads which carry the Environmental Choice Australia logo.

This example shows up the limitations of the program: while it can prevent misleading and meaningless claims being made, the claims it does allow don't necessarily tell the full story about a product's environmental impact. By al-

lowing manufacturers to highlight a single aspect of a product as environmentally advantageous, Environmental Choice Australia could encourage consumers to make choices on this basis, rather than considering the product's overall impact.

This situation may be about to change, however. The federal and state environment ministers (whose decision initiated the establishment of the program) are currently considering changing it, to bring it in line with eco-labelling programs in other countries.

One of the options under consideration is to develop specifications for particular types of product which, if met, would result in minimising their potential environmental impact. (For example, the specifications for laundry detergents might be that the total product biodegrades readily within a certain length of time, doesn't contain certain ingredients, and has minimal packaging made from recyclable and/or recycled material.) Manufacturers would apply to use the program's logo if they felt their product met the specifications.

Although not a complete cradle-to-grave assessment, by focusing on key areas of environmental impact this approach would result in much better buying criteria, provided the guidelines are tight enough.

Cleaning up — and creating awareness of, the litter problem at the same time.



CLEANING UP OUR ACT

CLEAN UP AUSTRALIA DAY is set for Sunday, March 7. Roadsides are to be targeted for special attention this year, after last year's clean-up showed them to be favourite littering sites for Australians.

Packaging from convenience foods — drink cans, confectionery and chip wrappers, bottles, polystyrene containers, etc — tossed from cars or left behind in parks and picnic spots dominated the litter stream. The 1992 Rubbish Report, the annual survey of the type and location of rubbish collected on Clean Up Day, found 75% of the items were packaging or packaging related. This is 18% less than last year, but still a very high proportion.

While the fast food industry has copped a lot of flak over packaging, consumer behaviour also leaves a lot to be desired. Clean Up Australia Day has the dual effects of raising community awareness of the litter problem as well as removing many of the blots on our landscape.

If you'd like to be among the thousands of volunteers who help collect rubbish on the day, phone 0055 29409.

ENVIRONMENTAL CLAIMS CHECKED BY



The Environmental Choice logo — proposed changes should make its use less confusing.

WASH THE DISHES, DRY THE DISHES...

You've got friends coming to dinner in next-to-no-time and you haven't even done the dishes! Perhaps you need one of our recommended dishwashers.

MARKET RESEARCH indicates consumers want to buy dishwashers that wash large loads in very little time, but they are also becoming increasingly concerned about saving water and energy. In this test we decided to find out if manufacturers are responding to consumer demand for environmentally sensitive dishwashers. Instead of basing our assessment purely on how well models wash and dry dishes and their ease of use, this time we have included water and energy efficiency in our overall ratings — and their inclusion has definitely changed the overall score of some models.

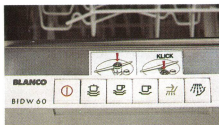
TOO KEEN TO BE GREEN?

The energy labelling scheme, which is now compulsory for dishwashers in NSW, Victoria, SA and WA and due to be introduced into Queensland and Tasmania, is supposed to enable consumers to select energy-efficient appliances and encourage manufacturers to enhance the efficiency of their products. But is the scheme fulfilling these functions in the case of dishwashers?

Under the scheme, if the energy consumption is the same for a range of machines, the machine with the highest capacity will get the highest energy rating. In other words, by increasing the number of place settings, it is possible to gain a higher energy rating because the machine's energy consumption per place setting is reduced. The downside is that machines with 14 or 15 place settings are tedious to load to their limit, so it is unlikely this would be done in normal day-to-day use. But if the machines aren't loaded to capacity, the claimed energy savings may not be achieved, so the information on the machine's energy label may be misleading.

For this project we decided to test all the machines at 12 place settings, even if the stated capacity was 14, to see what effect this would have on loading and wash performance (in our last test most of the dishwashers claiming 14 or 15 place settings turned in poorer washing performance scores).

Testing at 12 place settings did give the advantage of being able to add the



The Blanco (pictured) and Rosieres have their controls along the top edge of the door, which gives a very clean look when the door is closed.



Foods like egg, margarine and chopped spinach, in carefully measured amounts, test the dishwashers' cleaning power.

last few items to the baskets with relative ease. It also meant less shielding of other items from the water spray because of the greater space available. What didn't change was the spacing between items of crockery and the efficiency of the dishwashers' filters, so the wash performance of models with poor spacing between crockery or poor filters didn't necessarily improve due to the load reduction.

ENERGY AND WATER USE

Dishwashers are heavy users of energy — their energy consumption is comparable to a top-loading washing machine doing a warm wash. In round dollar terms, the most energy-efficient, the KLEENMAID, would cost \$500 to power (used once a day) over a 10-year period (the approximate life expectancy of a dishwasher) and the least efficient, the SIMPSON 880M, \$695.

Over the years dishwashers have become more water-efficient, but there are large relative differences between them. In this test the machines that achieved good performance without excessive water consumption scored well overall. Most used between 21 and 30 litres of water on their normal program, but the ROSIERES is in a class of its own, using 40 litres. This model can't be recommended because of this excessive level of water consumption. Apart from the ROSIERES, only the OMEGA, KLEENMAID and SMEG used more than 25 litres.

The inclusion of energy and water consumption in our ratings altered the ranking of various models in comparison with similar models in previous tests. In particular, the KLEENMAID would have ranked lower if its good energy consumption was not taken into account and the ROSIERES higher but for its excessive water use.

WASHING AND DRYING

All the dishwashers gave acceptable drying results. Of those which rated highly overall, only the KLEENMAID was let down by a low drying score.

The SIMPSON 960B can't be recommended because of its poor wash result. The rest of the machines scored between 69% and 91% for washing performance, while it only managed 62%. When so many dishwashers manage scores of 80% and above (see table), we don't see why you should have to settle for less. We believe the machines with the finest filters and best spacing between items of crockery give the best wash performance.

WHAT TO BUY

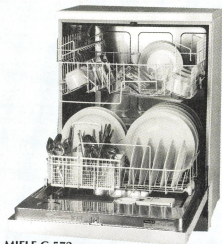
Models in rank order	Price (\$)*
MIELE G 572	1395/1659
AEG Favorit 675	1099/1399
KLEENMAID DW-2	1017/1099
ASKO ASEA 1403-262	1210/1480
equal BLANCO BIDW 60	1559/1780
BOSCH SMS 5012	1095/1299
SMEG LA 40	1139/1390
BOSCH SMS 7062	1495/1899
OMEGA DW 1407-2	999/1190
SIMPSON 880M	785/999

* Prices given indicate the range found in nationwide checks in December 1992.

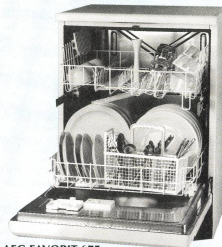
PROFILES

Models are listed in rank order. Prices given indicate the range found in nationwide checks in December 1992.

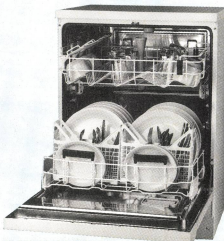
Vulcan was in the process of releasing a new Dishlex model while we were testing, which was not available in time to be included.



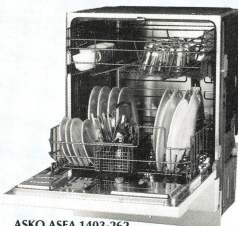
MIELE G 572



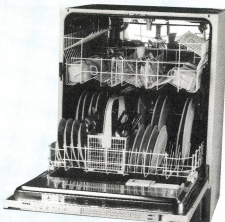
AEG FAVORIT 675



KLEENMAID DW-2



ASKO ASEA 1403-262



BLANCO BIDW 60



BOSCH SMS 5012

MIELE G 572

Price: \$1395/\$1659

Type: Freestanding with a worktop

Good points

- Best overall performer.
- High washing and drying performance score
- Equal best for ease of use.

AEG FAVORIT 675

Price: \$1099/\$1399

Type: Freestanding with a worktop

Good points

- Good overall performer.
- Good washing and drying performance.
- Good water consumption score.

KLEENMAID DW-2

Price: \$1017/\$1099

Type: Freestanding with a worktop

Good points

- Good overall performer.
- Equal highest washing performance.
- Best for energy consumption.
- Three-year warranty.

Bad points

- The worst for drying performance.

ASKO ASEA 1403-262

Price: \$1210/\$1480

Type: Built-in

Good points

- Good overall performer.
- Equal highest washing performance.

Bad points

- Among the worst for energy consumption.
- Access to the filter involved undoing two hand screws, which is inconvenient.

BLANCO BIDW 60

Price: \$1559/\$1780

Type: Integrated — has to be installed under kitchen worktop; separate decor panels needed

Good points

- Good overall performer.
- Good drying score.
- Good water consumption score and equal best for ease of use.
- Controls located across top edge of door, giving a very clean look when the door is shut.

BOSCH SMS 5012

Price: \$1095/\$1299

Type: Freestanding with a worktop

Good points

- Good overall performer.
- Good washing performance.
- Best score for drying.

Bad points

- Among the worst for energy consumption.

SMEG LA 40

Price: \$1139/\$1390
Type: Freestanding with a worktop
Good points
Good washing performance.
Bad points
Comparatively low drying and ease of use scores.

BOSCH SMS 7062

Price: \$1495/\$1899
Type: Freestanding with a worktop; integrated version also available — ask for SMI 7062
Good points
Good water consumption score.
Bad points
Low wash score — just acceptable.

OMEGA DW 1407-2

Price: \$999/\$1190
Type: Freestanding with a worktop
Good points
Nothing in particular.
Bad points
Equal lowest ease of use score.

SIMPSON 880M

Price: \$785/\$999
Type: Mobile, but also available to be built-in; ask for 880B.
Good points
Good water consumption score.
Bad points
The worst for energy consumption.

NOT RECOMMENDED

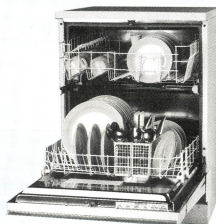
ROSIERES LVI 300

Price: \$1840/\$2040
Type: Integrated — has to be installed under a kitchen worktop; separate decor panels needed.
Good points
Controls located across top edge of door, giving a very clean look when door is closed.
Bad points

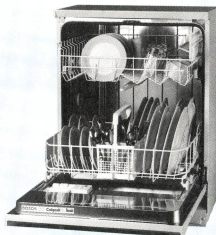
Equal worst overall score, pulled down largely by its score for water use — it used nearly twice the water of the best machine and a third more than the next worst model.
Among the worst for energy consumption.

SIMPSON 960B

Price: \$809/\$900
Type: Built-in, but an integrated model is also available; ask for 960I.
Good points
Good water consumption score.
Bad points
Equal worst overall performer.
Worst wash performance — 7% below the next worst. Email can do better than this (as the SIMPSON 880 model shows).
Equal lowest ease of use score.
Among the worst for energy consumption.



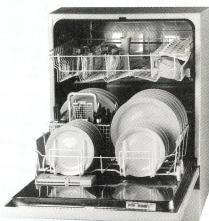
SMEG LA 40



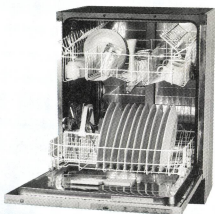
BOSCH SMS 7062



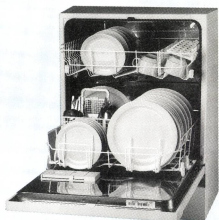
OMEGA DW 1407-2



SIMPSON 880



ROSIERES LVI 300



SIMPSON 960

DISHWASHERS

FEATURES

	1				2			3		4	5
	Brand/model (in rank order)	Manufacturer/ distributor	Origin	Price (\$)*	Warranty	Type	Dimensions (mm HxWxD)	Place settings	Water connection	Delayed wash start	Inlet safety valve
	MIELE G 572	Miele	Germany	1395/1659	1	FW	850x590x570	12	H or C		✓
	AEG Favorit 675	Andi Co	Germany	1099/1399	1 (A)	FW	860x590x560	12	H or C		✓
	KLEENMAID DW-2	Kleenmaid	France	1017/1099	3/20 (B)	FW	850x595x570	12	H or C		
	ASKO ASEA 1403-262	Cylinda	Sweden	1210/1480	2/10 (C)	B	820x590x570	14	H or C		
equal	BLANCO BIDW 60	Luft	Germany	1559/1780	1 (D)	I	820x595x550	12	H or C		✓
	BOSCH SMS 5012	Robert Bosch	Germany	1095/1299	1	FW	850x560x565	12	Cold		
	SMEG LA 40	Omega Appliances	Italy	1139/1390	2	FW	860x595x565	14	H or C		
	BOSCH SMS 7062	Robert Bosch	Germany	1495/1899	1	FW (E)	850x590x565	12	H or C		✓
	OMEGA DW 1407-2	Omega Appliances	Italy	999/1190	2	FW	855x600x595	12	H or C		
	SIMPSON 880M	Email	Australia	785/999	1	M (F)	875x590x650	14	H or C		
	NOT RECOMMENDED										
equal	ROSIERES LVI 300	Rosieres Australia	Italy	1840/2040	2	I	820x590x545	12	H or C		
	SIMPSON 960B	Email	Australia	809/900	1	B (G)	830x590x565	14	H or C		✓

* Prices shown indicate the range found in nationwide checks in December 1992.

(A) Manufacturer says warranty is now three years.
(B) Three years for machine plus 20 years for stainless steel liner.

(C) Two years for machine plus 10 years for stainless steel liner.

(D) Warranty stated for UK but distributor confirms it applies in Australia.

(E) Integrated model also available; ask for SMI 7062.

(F) Also available as a built-in; ask for 880B.

(G) Integrated model also available; ask for 960 I

1 SIMILAR MODELS

■ The AEG Favorit 875 freestanding and integrated models (see Type below for an explanation of these terms) are technically similar to the AEG Favorit 675 tested, but they have more programs, LED indicators, a 19-hour delay start time facility and pushbuttons rather than knobs.

■ Models technically similar to the SIMPSON 880 models are: SIMPSON 860, CONCORDE 862, CONTESSA 864, RIVIERA 866 and 868B and WESTINGHOUSE Silhouette 904B. Those technically similar to the SIMPSON 960 models are the SIMPSON 980B and WESTINGHOUSE Silhouette 906B.

■ Models similar to the ASKO ASEA 1403 tested are the ASKO ASEA 1253 and the ASKO ASEA 1503. All have the same normal wash but differ slightly in the selection of other programs. The 1253 has a manual timer, is noisier and has fewer features than the other two. The 1403 has rotary knob electronic controls, whereas the 1503 has pushbutton electronics and an inside light.

2 TYPE

B — Built-in: must be installed under a kitchen bench but doesn't require special decor panels.

F — Freestanding without worktop.

FW — Freestanding with worktop.

I — Integrated: designed to be permanently installed under a kitchen worktop; normally supplied without base panels, decor panels or worktop, to enable you to colour co-ordinate with your kitchen.

M — Mobile: you wheel it up to the sink and attach the hose to a mixer tap each time you use it, rather than it being plumbed in. Check the hose connection when you buy — you may need to modify your tap(s) to fit.

3 WATER CONNECTION

H or C — You can use hot or cold water.

Cold — Cold connection only; the machine heats the water it needs.

Arguments for having the option to use hot water:

■ Allows shorter program time and is promoted by manufacturers such as Vulcan to make best use of fast wash programs.

■ Enables you to use water heated by cheaper off-peak electricity, gas or solar power.

■ Better loosening of greasy residues with a hot prewash.

■ More effective odour elimination with a hot rinse.

Arguments against the use of hot water:

■ Using cold water reduces energy consumption because the machine heats only

the amount of water needed and doesn't use hot water for rinsing.

■ Hot water may bake on protein-based foods.

■ Some dishwashers may be damaged or have reduced life by connection to excessively hot water. As a precaution don't use water over 60°C (some solar and off-peak electricity systems run hotter than this).

FEATURES

4 DELAYED WASH START

Enables user to program the machine to start at a particular time — useful to take advantage of off-peak electricity or solar heating or if you want to be asleep or out of the house while the machine is working.

5 INLET SAFETY VALVE

Mounted on the hose, it cuts off the water at the water inlet point if the hose bursts, for example, so the water supply is automatically cut off.

6 OVERFLOW PROTECTION

This anti-flood device protects the machine from overflowing. Only the AEG and ASKO ASEA note this in their instruction booklet; in the other cases it's a manufacturer's claim.

PERFORMANCE

	7	8	9	10	11	12	13	14	
Running costs (\$/10 years)	Noise (dB)	Washing score (%)	Drying score (%)	Water score (%)	Energy score (%)	Ease of use score (%)	Overall score (%)	Brand/model (in rank order)	
570	50	90	86	76	64	80	83	MIELE G 572	
625	49	87	84	85	52	77	80	AEG Favorit 675	
500	53	91	69	63	78	77	79	KLEENMAID DW-2	
675	53	91	83	74	42	77	78	ASKO ASEA 1403-262	
630	58	82	84	84	51	80	78	BLANCO BIDW 60	equal
665	48	86	88	75	44	78	78	BOSCH SMS 5012	
630	53	88	73	56	51	75	73	SMEG LA 40	
605	46	69	80	79	56	78	72	BOSCH SMS 7062	
615	55	73	81	67	54	73	71	OMEGA DW 1407-2	
695	63	74	76	82	38	77	70	SIMPSON 880M	
NOT RECOMMENDED									
665	54	79	81	24	44	80	66	ROSIERES LVI 300	equal
660	53	62	75	81	44	73	66	SIMPSON 960B	

PERFORMANCE

7 RUNNING COSTS

Running costs over 10 years are calculated on the basis of 10 cents per kWh and on the assumption that the dishwasher will be used once a day.

8 NOISE

The noise measurements ranged from 46 to 58 decibels. The two BOSCH machines, the AEG and the MIELE were the quietest, while the SIMPSON 880M stands out as the noisiest.

9 WASHING SCORE

The soil removal performance of the machines was assessed using the methods of Australian standard AS 2007. This method tests the machines' ability to remove fatty products (margarine), protein (egg white) and to filter out small particles (chopped spinach) as well as baby cereal, tomato juice and tea. This is representative of the types of foodstuffs a dishwasher would have to deal with in normal use. The program selected for each machine was that recommended in the manufacturers' instructions for normally soiled crockery.

10 DRYING SCORE

Drying is assessed 30 minutes after the wash program has stopped. This is to give the

residual heat from the washing and rinsing process time to dry off most of the water. All that should remain after this time are spots and/or streaks of water — the less of either, the higher the score awarded.

11 WATER CONSUMPTION SCORE

Water consumption has not been included in the rating of dishwashers in previous tests. All but one (the ROSIERES) of the machines in this test used less than 30 litres. According to our scale, ideal water consumption would be 15.6 litres, whereas anything above 35 litres is considered excessive.

12 ENERGY CONSUMPTION SCORE

Dishwashers are heavy energy users. Ideally, total consumption for one 'normal' cycle should be around 1 kWh. At the other end of our rating scale, if a machine consumed 2.4 kWh, it would score zero.

13 EASE OF USE SCORE

The layout of controls and their ease of operation, ease of reading control settings, how easy it is to clean the machine's filter, door operation and loading/unloading are all factored into our ease of use assessment.

14 OVERALL SCORE

Each dishwasher's overall score was calculated by weighting washing and drying per-

formance, energy and water consumption and ease of use as follows:

- Washing performance: 40%
- Drying performance: 20%
- Water consumption: 15%
- Energy consumption: 15%
- Ease of use: 10%

FOR PEOPLE WITH DISABILITIES

According to the Independent Living Centre, the main points to look for when choosing a dishwasher for use by people with disabilities are:

- The door should be light and easy to open and close.
- Raised crossbars on control knobs are desirable and pushbuttons should require only a light push.
- Filters should be easily accessible — that is, as close to the door as possible because reaching forward is difficult for people with back problems.
- Large handles on filters are desirable for easy grip.
- One-piece filters are better than those made up of two or more pieces.

The dishwashers considered most convenient for people with disabilities were the two BOSCH machines. The MIELE was also considered to be good except that some people may find the door difficult to close.



LETTERS

Send your letters to **CHOICE**, 57 Carrington Road, Marrickville 2204. Where possible, please include your daytime telephone number, as we may wish to contact you direct for more information or to discuss your comments and queries.

LEFT OUT

It was obvious from your test of secateurs (CHOICE, October 1992) that none of your staff is left-handed. The test report compared buying secateurs to buying boots: the fit must be right, it should feel comfortable — how would you like it if you had to wear the boots on the opposite feet? The report showed total ignorance of any of the issues of left-handed people.

Left-handed people were mentioned — but only in a passing comment. From the report it is impossible for me to know if any of the secateurs are suitable.

For instance, it was not stated which secateurs come in a left-handed model, or which brands were suitable for either left or right-handed people. If the report had stated where the blade locks were, at least it might have given me some idea.

This particular test has shown me to be very wary of CHOICE tests, when a group which makes up a substantial proportion of the population is overlooked, making the results completely useless to that group.

M Rawolle
Wynn Vale, SA

Our apologies to all left-handers who felt ignored in this secateurs test. Our test panel did include several left-handers, but they didn't report back any particular problems which related to being left-handed — it might have been helpful to left-handers if we'd said this.

PAY TV PRAISE

As one who has participated in the debate surrounding the possible introduction of pay television services in Australia for more than a decade, I have frequently been concerned at the level of ignorance and superficiality demonstrated by those who have sought to enter or report on that debate. To a large extent this has been one of the main contributing factors to the extended duration of the debate, and the apparent impossibility of arriving at a sensible government policy on the matter.

It was therefore with a sense of real delight that I read the article on pay TV

in your October issue. In my view, this provided an informative and perceptive, but at the same time balanced, assessment of what can be a complex topic.

It provided your readers with a practical coverage of pay TV and the principal operational issues likely to concern Australian consumers.

Your magazine and the article's author are to be congratulated for making the effort to report fully and factually on a subject about which many others seem only to be capable of gibberish or bias.

R J Rowe
Richard J Rowe & Associates,
Communications and Public Affairs
Consultants
Mooloolaba, Qld

STANDARDS DEFENDED

I write with regard to your article *The Australian Standard — Flag of excellence or compromise?* (December 1992). Covering nearly three and a half pages, this article must be regarded as a major statement by your magazine and the Consumers' Association. Yet it is deficient in fact and completeness.

In an organisation of nearly 1500 technical committees, over 9000 expert volunteer members and with 2800 items of work in progress, it is inevitable that not everything Standards Australia does is perfect. But this is the consensus model adopted around the world for formulating standards and undertaking conformity assessment, and Standards Australia ranks high on the performance list of national and international standards bodies. Improvement to the process comes as a result of constructive comment and support.

It's so easy to identify a number of poor performances by using un sourced accusers, and then editorialise around it all, taking care to pay absolutely no attention to any of its successes. The result is a highly biased article.

Most of the criticisms in the article could have been resolved or investigated by discussion. The problem has traditionally been a lack of funding in the consumer movement to provide adequately briefed representatives who can argue technical points as well as work

priorities in a national setting. When results from the excellent testing carried out by the Consumers' Association are brought before committees, action is taken. The article, in my view, is a most negative and incomplete piece of writing.

Jack Moncrieff
Media and Communications Manager
Standards Australia

CRIMINAL CRUELTY

There are two matters which I must bring to your attention and to that of your readers in regard to your article *What price vet fees?* (CHOICE, November 1992), and to options offered to pet owners in this article.

The first is the paragraph commencing, "Let's talk about a broken femur (thigh bone) in a young active dog. You could do nothing ... because most of the time it will knit." In this case 'doing nothing' would be a criminal offence under the various acts for the prevention of cruelty in most states. Owners following this course have been successfully prosecuted in several states for "failing to provide adequate veterinary attention" and allowing "unreasonable pain and suffering". The RSPCA would also consider prosecuting a veterinary surgeon who offered such advice, particularly for a young active animal. The acceptable options for the owner are:

- Treatment involving setting and immobilisation of the leg and/or of the dog.
- Amputation.
- Euthanasia.

The second matter which should be brought to the attention of your readers is in the paragraph commencing, "There will nearly always be options ...". One option suggested is, "Leave it to suffer (and either get better by itself or die)". This again is a criminal offence under the acts for prevention of cruelty to animals, and would leave the owner making such a decision liable for prosecution. The only acceptable options are to treat or to euthanase. There are indeed treatment options, but "doing nothing" is not one of them.

Barbara Wellington, BVSc
Manager, RSPCA Veterinary Clinic, Vic.



WHAT DO YOU KNOW?

- 1** A group of 400 consumers interviewed recently in Sydney considered which of the following products and services had the least truthful advertising?
 - A) Environmentally friendly products.
 - B) Banks.
 - C) Cars.
 - D) Store discount sales.
 - E) Real estate.
 - F) Insurance.
 - G) Health products.
- 2** Place the following strategies for protection against skin cancer in order of descending importance:
 - A) Use physical barriers to protect your skin from sunburn and UV radiation, including shade, clothing, hats and sunglasses.
 - B) Stay out of the sun between 11 am and 3 pm (daylight saving time).
 - C) Use maximum-protection (SPF 15+) sunscreen.
- 3** Which government has said all car wrecks, used tyres, batteries and waste oil will have to be recycled from 1994?
 - A) Australian.
 - B) Dutch.
 - C) New Zealand.
 - D) British.
- 4** Over a two-year period, using which of the following types of nappy has been estimated to be the most expensive?
 - A) Traditional cotton.
 - B) Fitted cotton.
 - C) Nappy service.
 - D) Disposables.

- 5** Which car company recently implemented a plastics recycling system?
 - A) Holden.
 - B) Mazda.
 - C) Ford.
 - D) Toyota.

ANSWERS

- 1. A** — 21.4% of the group said environmentally friendly products had the least truthful advertising, 21.2% said banks did, 13.4% cars, 13.3% store discount sales, 10.9% real estate, 8.1% insurance and 3.4% health products.
- 2. B then A then C** according to the Anti-Cancer Council of Victoria. And remember that even if you're sitting in the shade you may still be getting exposure to harmful indirect radiation, perhaps reflected off sand or water. It's also important to wear both a hat and sunglasses.
- 3. B** — The Dutch environmental minister told parliament legislation obliging industry to reuse raw materials from these products would be drawn up by the end of 1992. The legislation marks the latest step in an ambitious government project to recycle 60% of all waste by 2000.
- 4. D** — According to Douglas Pharmaceuticals, the estimated cost of using disposables over two years amounts to approximately \$2600; a nappy service, \$2200; fitted cotton nappies with synthetic wadding, \$832; traditional cotton nappies, \$488.
- 5. C** — Ford Australia has implemented a coding system on plastic parts as a first step in positioning the company to improve vehicle recyclability. The system involves marking plastic vehicle components to designate the material used during fabrication. The aim is to help dismantlers to identify and segregate plastics for recycling.



RECALLS AND BANS

If you find a recall or ban not on our list, please let us know.

K Mart has recalled **LEARNING TIME PLASTIC PULL ALONG PONY TOY** as the ears may break off if the toy is dropped, causing a possible ingestion or inhalation hazard. The pale blue pony is approximately 20 cm high, with black ears, yellow wheels and a pink bridle. Return to K Mart for refund.

BMW has recalled **BMW 525i MOTOR VEHICLES** (made August 1988 to June 1989, with battery in engine compartment, model type E34) as the fuse point may suffer from thermal aging and cause a total loss of electrical power. Affected models are in the following chassis ranges: 2078251-2079950, 3431046-3431820, BC82006-BC83375, BE12003-BE14557. Return to a BMW dealer for rectification.

Volvo has recalled some 1992 **VOLVO 240 SERIES MOTOR VEHICLES** to check the fittings of the front suspension ball joints, as in some cases the nut which joins the front spring strut and ball joint may be insufficiently

torqued. This could result in suspension play or separation if the nut becomes loose, affecting handling of the car. Contact Volvo with your chassis number for confirmation whether your car is affected by this recall.

BEIERSDORF BPC WOUND DRESSING NO. 13, 14 and 15 have been recalled as they have failed tests for sterility. Affected batches are 5413.91 (dressing no.13), 7647.92 (no.14) and 5415.91 (no.15). Return to retailer.

WARNING

K Mart, Coles-Fossey and Coles Supermarkets have issued a warning on the **ARTIN TAKE-APART CAR TOY** as the trumpet-shaped exhausts can break off the removable rear fitting and may present a possible ingestion or inhalation hazard. Parents can remove the exhaust trumpets using a small screwdriver or return to retailer for refund or to have the trumpets removed for you.

PLEASE SEND US

- change of address ■ renewal
- subscription inquiries

Just write to:

The Subscription Section
Australian Consumers' Association
57 Carrington Road, Marrickville 2204.
or phone (02) 558 8088

TWELVE MONTH INDEX

MARCH 1992 — FEBRUARY 1993

(T) test

(D) includes assessment of suitability for those with disabilities

(F) feature — general advice

(M) feature — includes market information

(S) subscriber survey or user trial

(C) Consumer in law

(L) letter

(U) update of previous report

* additions or corrections to reports

Abattoirs	Jun(F),Sep(L)	Energy use in the home	May(F)	Microwave ovens, small	Jun(T,D),Aug*
Air conditioners, reverse-cycle	Nov(T,D)	Fans, Mistral	Apr(C)	Mistral fans	Apr(C)
Air quality, indoor	Jan(F)	Food		Mod-n-Aire gas heater	Jul(F)
Allergies	Nov(F)	canned, drained weight	Aug(T)	Money for travelling	May(F)
Annuities	Mar(F)	cholesterol and oat bran	Jun(F)	National and 'generic' brands	Aug(F)
Answering machines	Oct(T)	coffee bags	Oct(S)	Network selling	Jul(F)
Arthritis	Oct(F)	frozen desserts	Dec(T)	Notebook computers	Dec(T)
Audio equipment		irradiation of	Aug(F)	Oat bran	Jun(F)
buying hifi components	Apr(F)	labelling	Mar(F)	Orbital sanders	Jun(T)
car radio/cassette players	Jun(T)	packaged meals for kids	Feb(M)	Ozone layer	Aug(F)
Australian-made labelling	Jan(F)	soy drinks	Apr(T)	Packaging, 'green'	Jun(F)
Bank accounts	Sep(M),Nov*	sugar in	Apr(F)	Pay TV	Oct(F),Feb(L)
Barbecues, kettle	Jan(T)	yoghurt	Nov(T,F)	Pest inspections	May(F),Jul(L)
Bicycle helmets	Oct(T)	Frypans, electric	Aug(T)	Phone advice, legal	Nov(C)
Blenders, handheld	Nov(T,D)	Funerals, organising	Sep(F)	Phones	
Breast cancer	Jan(F)	Gas heater, Mod-n-Aire	Jul(F)	cellular	Jul(T,D),Oct(L)
Business insolvency	Mar(C)	Gas heaters, unflued	Apr(T,D)	cordless	Dec(T,D)
Buying guide, annual	Dec	'Generic' and national brands	Aug(F)	Pool fences	Dec(F)
Carpets, compact	Feb(T)	Goods and services tax	Jul(F),Oct(L)	Reclaiming stolen property	Sep(C)
Carpets		Greenhouse effect	Oct(F)	Refrigerators	
spot cleaners for	Sep(T)	Hair and hair products	Jan(F)	200-299 litre	Mar(T),May(L)
stain-resistance treatments	Nov(T)	Handheld blenders	Nov(T,D)	300-350 litre	Sep(T,D)
Cars		Health insurance	Nov(M)	Reliability survey, cars	Aug(S)
clamping and tow-away	Feb(C)	Heaters, gas unflued	Apr(T,D)	Retirement villages	May(F)
insurance	Dec(S)	Helmets, bicycle	Oct(T)	Reverse-cycle air conditioners	Nov(T,D)
radio/cassette players	Jun(T)	Hifi, buying components	Apr(F)	Safety switches	Jul(F)
reliability survey	Aug(S)	Home, chemicals in the	Sep(F)	Sanders, orbital	Jun(T)
steering wheel locks	May(T,D)	Hormone replacement therapy	May(F)	Secateurs	Oct(S),Feb(L)
Cellular phones	Jul(T,D),Oct(L)	Household energy use	May(F)	Shade materials	Jan(F)
Chemicals in the home	Sep(F)	Index, three-year	Jun	Skates, in-line	Dec(T)
Cholesterol and oat bran	Jun(F)	In-line skates	Dec(T)	Sleeping pills	Apr(F)
Clothes dryers	Mar(T,D)	Indoor air quality	Jan(F)	Soy drinks	Apr(T)
Coffee bags	Oct(S)	Insolvency, business	Mar(C)	Spot carpet cleaners	Sep(T)
Complaints against lawyers	Jun(C)	Insurance		Standards Australia	Dec(F),Feb(L)
Computers, notebook	Dec(T)	car	Dec(S)	Steering wheel locks	May(T,D)
Cordless phones	Dec(T,D)	health	Nov(M)	Stolen property, reclaiming	Sep(C)
Credit cards	Feb(F)	Irons	Mar(T,D)	Sugar in food	Apr(F)
Desserts, frozen	Dec(T)	Irradiation of food	Aug(F)	Sun protection	Jan(F)
Dishwashers	Feb(T,D)	Jargon, economic	Oct(F)	Superannuation guarantee	Feb(F)
Do-it-yourself and the law	May(C)	Labelling, Australian-made	Jan(F)	Supermarket survey	Jul(S)
Drained weight of canned food	Aug(T)	Lawyers, complaints against	Jun(C)	Tampons	Apr(T)
Economic jargon explained	Oct(F)	Legal advice, by phone	Nov(C)	Tax, goods and services	Jul(F),Oct(L)
Electric frypans	Aug(T)	Lost wallet, what to do	Aug(C),Nov*	Telecommunications	Feb(M)
Emergencies, home	Mar(F),Aug(L)	Meat production	Jun(F),Sep(L)	Travel money	May(F)
				TV, pay	Oct(F),Feb(L)
				TVs, medium-sized	Jul(T,D)
				Unit pricing	Sep(F)
				Vets' fees	Nov(F),Jan(L),Feb(L)
				Wallet, if you lose	Aug(C),Nov*
				Washing machines	Jan(T,D)
				Water filters	Feb(T)
				Yoghurt	Nov(T,F)